GLOBAL PART NUMBERS
JUNE 2001

muRata
Innovator in Electronics

MURATA PRODUCTS
Global Part Numbering

As typified by the prevalence of business innovations such as Supply Chain Management and E-commerce, business environments are undergoing remarkable changes these days.
At Murata, we consider adapting to our customer's EDP systems to be an urgent task. That is why we are committed to building global systems for order-receiving and production. As part of this effort, Murata has established a new part numbering system that is rationalized, systematic and, most importantly, globally unified. This brochure is designed to provide our valued customers with an explanation of the structure of our global part numbering system that have been adopted since June 2001. It includes a table that explains the meaning of codes for most Murata product categories.
Please take a minute to read through and study the brochure.
Please note that you can easily translate between current part numbers and their corresponding new global equivalents using our Internet Search Engine (http://www.murata.co.jp/search/) or the latest version (2.43) of our "2002 Murata Products" CD-ROM.
If you have any questions related to our new global part numbering system, please feel free to contact your Murata sales office, sales representative or distributor.

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● Part Numbering

Chip Monolithic Ceramic Capacitors

(Global Part Number)

GR	M	18	8	B1	1H	102	K	A01	K
❶	❷	❸	❹	❺	❻	❼	❽	❾	❿

❶Product ID

❷Series

Product ID	Code	Series
GR	M	Tin Plated layer
	P	Soldering Electrode
ER	F	High-frequency and high-power Type
	H	High-frequency and high-power Type (Ribbon Terminal)
	A	High-frequency Type
	D	High-frequency Type (Ribbon Terminal)
GQ	M	High-frequency for Flow/Reflow Soldering
GM	A	Monolithic Microchip
GN	M	Capacitor Array
LL	L	Low ESL Wide-width Type
GJ	6	Low Dissipation
	2	Smoothing Type
GA	2	for AC250V (r.m.s.)
	3	Safety Standard Recognized Type

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
03	0.6×0.3 mm	0201
05	0.5×0.5 mm	0202
08	0.8×0.8 mm	0303
11	1.25×1.0 mm	0504
15	1.0×0.5 mm	0402
18	1.6×0.8 mm	0603
1X	Depends on individual standards.	
21	2.0×1.25 mm	0805
22	2.8×2.8 mm	1111
31	3.2×1.6 mm	1206
32	3.2×2.5 mm	1210
3X	Depends on individual standards.	
42	4.5×2.0 mm	1808
43	4.5×3.2 mm	1812
52	5.7×2.8 mm	2211
55	5.7×5.0 mm	2220

❹Dimension (T)

Code	Dimension (T)
3	0.3 mm
4	4-elements (Array Type)
5	0.5 mm
6	0.6 mm
7	0.7 mm
8	0.8 mm
9	0.85 mm
A	1.0 mm
B	1.25 mm
C	1.6 mm
D	2.0 mm
E	2.5 mm
M	1.15 mm
N	1.35 mm
R	1.8 mm
Q	1.5 mm
X	Depends on individual standards.

With the array type GNM series, "Dimension(T)" indicates the number of elements.

❺Temperature Characteristics

Code	Temperature Characteristics	Temperature Range	Capacitance Change or Temperature Coefficient	Operating Temperature Range
1X	SL	20 to 85°C	+350 to -1000ppm/°C	-55 to 125°C
5C	C0G	-55 to 125°C	0±30ppm/°C	-55 to 125°C
6C	C0H	-55 to 125°C	0±60ppm/°C	-55 to 125°C
6P	P2H	-55 to 85°C	-150±60ppm/°C	-55 to 125°C
6R	R2H	-55 to 85°C	-220±60ppm/°C	-55 to 125°C
6S	S2H	-55 to 85°C	-330±60ppm/°C	-55 to 125°C

Continued on the following page.

Continued from the preceding page.

6T	T2H	-55 to 85°C	-470±60ppm/°C	-55 to 125°C
7U	U2J	-55 to 85°C	-750±120ppm/°C	-55 to 125°C
B3	B	-25 to 85°C	±10%	-25 to 85°C *
E4	Z5U	10 to 85°C	+22, -56%	10 to 85°C
F5	Y5V	-30 to 85°C	+22, -82%	-30 to 85°C
R3	R	-55 to 125°C	±15%	-55 to 125°C
R6	X5R	-55 to 85°C	±15%	-55 to 85°C
R7	X7R	-55 to 125°C	±15%	-55 to 125°C
9E	ZLM	-25 to 20°C	-4700+100/-2500ppm/°C	-25 to 85°C
		20 to 85°C	-4700+500/-1000ppm/°C	

* GRM series 630V : -55 to 125°C

❻Rated Voltage

Code	Rated Voltage
0J	DC6.3V
1A	DC10V
1C	DC16V
1E	DC25V
1H	DC50V
2A	DC100V
2D	DC200V
2E	DC250V
YD	DC300V
2H	DC500V
2J	DC630V
3A	DC1kV
3D	DC2kV
3F	DC3.15kV
E2	AC250V
GB	X2; AC250V (Safety Standard Recognized Type GB)
GC	X1, Y2; AC250V (Safety Standard Recognized Type GC)
GD	Y3; AC250V (Safety Standard Recognized Type GD)
GF	Y2; AC250V (Safety Standard Recognized Type GF)

❼Capacitance

Expressed by three figures. The unit is pico-farad(pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Capacitance
R50	0.5pF
1R0	1.0pF
100	10pF
103	10000pF

❽Capacitance Tolerance

Code	Capacitance Tolerance	TC	Series	Capacitance Step	
B	±0.1pF	CΔ	**GJ6**	≦5pF	E24 Series,1pF
C	±0.25pF	CΔ–SL	**GRP/GRM/ERF/ERH/ERA/ERD/GQM**	≦5pF	* 1pF
		CΔ	**GJ6**	<10pF	E24 Series,1pF
D	±0.5pF	CΔ–SL	**GRP/GRM**	6.0 to 9.0pF	* 1pF
		CΔ	**ERF/ERH/ERA/ERD/GQM/GJ6**	5.1 to 9.1pF	E24 Series
G	±2%	CΔ	**GJ6**	≧10pF	E12 Series
		CΔ	**GQM**	≧10pF	E24 Series
J	±5%	CΔ–SL	**GRP/GRM**	≧10pF	E12 Series
		CΔ	**ERF/ERH/ERA/ERD/GQM/GJ6**	≧10pF	E24 Series
K	±10%	B,R,X7R,X5R,ZLM	**GRP/GRM/GA3**	E6 Series	
M	±20%	Z5U	**GRM**	E3 Series	
		B,R,X7R	**GMA/LLL**	E6 Series	
		B	**GA2**	E3 Series	
Z	+80%, -20%	F,Y5V	**GRP/GRM/GJ2**	E3 Series	
R	Depends on individual standards.				

***** E24 series is also available.

Continued on the following page.

Continued from the preceding page.

❾Individual Specification Code

Code	Series	Individual Specification	Temperature Characteristics Type *4	Inner Electrode	Under coat metal of Outer Electrode
A01	**GRM** *1	Standard Type	TC	Base Metal	Base Metal
	GRM *1/**GRP**/**LLL**		HiK		
A11	**GRM** *1	Special Dimension Type (Tolerances of L×W×T are ±0.15mm)	HiK	Base Metal	Base Metal
A12	**GRM** *1	Special Characteristics (Applied Voltage is ×1.25 of Rated Voltage at High Temperature Load Test)	HiK	Base Metal	Base Metal
A61	**GRM** *1	Special Characteristics (Under special control)	HiK	Base Metal	Base Metal
B01	**GJ6**/**GQM**	Standard Type	TC	Base Metal (Cu)	Base Metal
C01	**GRM** *1	Standard Type	HiK	Base Metal	Precious Metal
C11	**GRM** *1	Special Dimension Type (Tolerances of L×W are ±0.2mm, others)	HiK	Base Metal	Precious Metal
C12	**GRM** *1	Special Dimension Type (Length is 3.2±0.2, Width is 1.6±0.2mm, Thickness is 1.2 ±0.1mm)	HiK	Base Metal	Precious Metal
D01	**ERA**/**ERD**/**ERF**/**ERH**	Standard Type (Non-coated type for ERH series)	TC	Precious Metal	Precious Metal
	GRM *1/**GRP**		TC		
	GRM *1/**GJ2**/**GMA**/**GRP**/**LLL**		HiK		
D02	**ERH**	Standard Type (Coated with Resin)	TC	Precious Metal	Precious Metal
	GRP	Standard Type (Ceramic Material of Relaxor Type)	HiK		
D11	**GJ2**	Special Dimension Type (Thickness is 1.8±0.2mm)	HiK	Precious Metal	Precious Metal
	GRP	Special Dimension Type (Thickness is 0.25±0.05mm)	TC		
D12	**GJ2**	Special Dimension Type (Thickness is 2.2±0.3mm)	HiK	Precious Metal	Precious Metal
V01	**GRM** *2	Standard Type (New Ceramic Material)	TC	Precious Metal	Precious Metal
W01	**GRM** *3/**GA3**	Standard Type	HiK	Base Metal	Base Metal
	GRM *3		TC		
W02	**GA3**	Special Dimension Type (Tolerance of Thickness is ±0.3mm)	HiK	Base Metal	Base Metal
W03	**GRM** *3	Special Dimension Type (Tolerance of Thickness is ±0.2mm)	HiK	Base Metal	Base Metal
Y01	**GRM** *3	Standard Type	TC	Precious Metal	Precious Metal
	GRM *3		HiK		
Y02	**GA2**/**GA3**	Special Dimension Type (Tolerance of Thickness is ±0.3mm)	HiK	Precious Metal	Precious Metal
	GRM *3		TC		
Y05	**GRM** *3	Special Dimension Type (Thickness is 2.7+0/-0.3mm)	HiK	Precious Metal	Precious Metal
Y06	**GA3**	Special Dimension Type (Thickness is 2.7±0.3mm)	HiK	Precious Metal	Precious Metal
Y21	**GRM** *2	Standard Type	TC	Precious Metal	Precious Metal
Z01	**GRM** *1/**GRP**	Standard Type (New Ceramic Material)	TC	Precious Metal	Precious Metal

*****1 Apply to rated voltage 100V and under.
*****2 Apply to rated voltage 200/500V.
*****3 Apply to rated voltage 250V, 630V to 3.15kV.
*****4 "TC"means Temperature Conpensating Type and "Hik"means High Dielectric Type.

❿Packaging

Code	Packaging
E	ø178mm 2mm Pitch Paper Taping
F	ø330mm 2mm Pitch Paper Taping
L	ø178mm 4mm Pitch Plastic Taping
D	ø178mm 4mm Pitch Paper Taping
K	ø330mm 4mm Pitch Plastic Taping
J	ø330mm 4mm Pitch Paper Taping
B	Bulk
C	Bulk Case
T	Bulk Tray

Monolithic Ceramic Capacitors (lead type)

(Global Part Number) **RP** ❶ **E** ❷ **R1** ❸ **1H** ❹ **104** ❺ **K** ❻ **2** ❼ **M1** ❽ **A01** ❾ **A** ❿

❶Product ID

❷Series/Terminal

Product ID	Series/Terminal	
RP	**E**	Monolithic Ceramic Capacitors Lead Type

❸Temperature Characteristics

Code	Temperature Charcteristics	Temperature Range	Capacitance Change or Temperature Coeffficent	Operating Temperature Range
5C	C0G	-55 to 125°C	0±30ppm/°C	-55 to 125°C
6R	R2H	-55 to 85°C	-220±60ppm/°C	-55 to 125°C
7U	U2J	-55 to 85°C	-750±120ppm/°C	-55 to 125°C
E4	Z5U	10 to 85°C	+22, -56%	10 to 85°C
F5	Y5V	-30 to 85°C	+22, -82%	-30 to 85°C
R7	X7R	-55 to 125°C	±15%	-55 to 125°C

❹Rated Voltage

Code	Rated Voltage
1E	DC25V
1H	DC50V
2A	DC100V
2D	DC200V

❺Capacitance

Expressed by three figures. The unit is pico-farad(pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers.
If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

❻Capacitance Tolerance

Code	Capacitance Tolerance	Temperature Characteristics	Capacitance Step
C	±0.25pF	C0G,R2H, U2J	≦5pF : 1pF Step
D	±0.5pF		6 to 9pF : 1pF Step
J	±5%		≧10 : E12 Series
K	±10%	X7R	E6 Series
M	±20%	Z5U	E3 Series
Z	+80%, -20%	Y5V	E3 Series

❼Size

Code	Size
1	3.5×3.0 mm
2	5.0×3.5 mm
3	5.0×4.5 mm
4	7.5×5.0 mm
5	7.5×7.5 mm
6	10.0×10.0 mm
7	12.5×12.5 mm

❽Lead Type

Code	Lead Type	Lead Space
A*	Straight Long Bulk	F=2.5mm
B*	Straight Long Bulk	F=5.0mm
C*	Straight Long Bulk	other than above
E*	Straight Taping	F=5.0mm
K*	Incrimp Bulk	F=5.0mm
M*	Incrimp Taping	F=5.0mm
P*	Outcrimp Bulk	F=2.5mm
S*	Outcrimp Taping	F=2.5mm

Lead style depends on individual standards. ***** indicates a figure.

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❾Individual Specification Code

Individual Specification Code	Series (size)	Temperature Characteristics Type	Individual Specification	Inner Electrode
A01	**RPE_2** (5.0x3.5mm)	HiK	Standard Type (small internal chip size of 2.0x1.25mm)	Base Metal
B01	**RPE_2** (5.0x3.5mm)	HiK	Standard Type (small internal chip size of 2.0x1.25mm)	Precious Metal
C02	**RPE_1** (3.5x3.0mm)	HiK	Standard Type (Steel lead wire)	Base Metal
C03	**RPE_2** (5.0x3.5mm)	HiK	Standard Type	Base Metal
	RPE_3 (5.0x4.5mm)			
D02	**RPE_1** (3.5x3.0mm)	HiK	Standard Type (Steel lead wire)	Precious Metal
D03	**RPE_1** (3.5x3.0mm)	TC/HiK	Standard Type	Precious Metal
	RPE_2 (5.0x3.5mm)			
	RPE_3 (5.0x4.5mm)			
E12	**RPE_4** (7.5x5.0mm)	HiK	Special Dimension Type (Special size of internal chip)	Base Metal
F03	**RPE_4** (7.5x5.0mm)	TC/HiK	Standard Type (Special size of internal chip)	Precious Metal
	RPE_5 (7.5x7.5mm)			
	RPE_6 (10.0x10.0mm)			
	RPE_7 (12.5x12.5mm)			
F12	**RPE_6** (10.0x10.0mm)	TC	Special Dimension Type (LxW size of 10x8.5 is availalbe.)	Precious Metal
F14	**RPE_6** (10.0x10.0mm)	HiK	Special Dimension Type (LxW size of 10x8.5 is availalbe.)	Precious Metal
X03	**RPE_4** (7.5x5.0mm)	TC	Standard Type (New Ceramic Material), (Special size of internal chip)	Precious Metal
	RPE_5 (7.5x7.5mm)			
	RPE_6 (10.0x10.0mm)			
	RPE_7 (12.5x12.5mm)			
X13	**RPE_6** (10.0x10.0mm)	TC	Special Dimension Type (New Ceramic Material), (LxW size of 10x8.5 is availalbe.)	Precious Metal
Y03	**RPE_1** (3.5x3.0mm)	TC/HiK	Standard Type (New Ceramic Material)	Precious Metal
	RPE_2 (5.0x3.5mm)			
	RPE_3 (5.0x4.5mm)			

❿Packaging

Code	Packaging
A	Ammo Pack
B	Bulk

Ceramic Capacitors (12V-500V)

(Global Part Number)

	❶	❷	❸	❹	❺	❻	❼	❽
	DD	1	04	-63	B	101	K	50
	DD		05	-63	B	101	K	500
	DD	3	04	-63	F	223	Z	25

❶Product ID

Product ID	
DD	Ceramic Capacitors (12V-500V)

❷Series Category

Code	Series (Type)
None	**DD10** Series (500V)
1	**DD100** Series (50V)
3	**DD300** Series (Surface Layer Type BC Capacitors)
4	**DD400** Series (Boundary Layer Type BC Capacitors)

❸Body Diameter

Code	Body Diameter	
	DD100/10 Series	**DD300/400** Series
04	4mm	4mm
05	5mm	5mm
06	6mm	6.3mm
07	7.5mm	7mm
08	8mm	8mm
09	9.5mm	—
10	10.5mm	10mm
11	11mm	—
12	12.5mm	12.5mm
14	14.5mm	—
16	16.5mm	—
18	18.5mm	—

❹Lead Style

Code	Lead Style
-63	Inside Crimp
-64	
-989	Inside Crimp Taping
-999	
-959	

❺Temperature Characteristics

Code	Cap. Change or Temp. Coeff.	Temperature Range
CK	0±250ppm/℃	−25 to +85℃
CJ	0±120ppm/℃	
CH	0±60ppm/℃	
SL	+350 to −1000ppm/℃	+20 to +85℃
B	±10%	−25 to +85℃
E	+20%, −55%	
F	+30%, −80%	
SR	±15%	

❻Capacitance

Expressed by three figures. The unit is pico-farad(pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

❼Capacitance Tolerance

Code	Capacitance Tolerance
C	±0.25pF
D	±0.5pF
J	±5%
K	±10%
M	±20%
P	+100%, −0%
Z	+80%, −20%

❽Rated Voltage

Code	DC Rated Voltage
12	12V
16	16V
25	25V
50	50V
500	500V

High Voltage Ceramic Capacitors (250V-6.3kV)

(Global Part Number) **DE** | **B** | **B3** | **3A** | **102** | **K** | **N2** | **A**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
DE	High-voltage (250V - 6.3kV) / Safety Standard Recognized Ceramic Capaictors

❷Series Category

Code	Outline	Contents
A	High-Voltage	Class1 (char. SL) DC1-3.15kV Rated
B		Class2 DC1-3.15kV Rated
C		Class 1,2 DC6.3kV Rated
H		High Temperature Guaranteed, Low-dissipation Factor (char. R, C)

First three digit (❶Product ID and ❷Series Category) express "Series Name".

❸Temperature Characteristics

Code	Temperature Characteristics	Cap.Change or Temp. Coeff.	Temperature Range
B3	B	±10%	−25 to +85℃
E3	E	+20%,−55%	
F3	F	+30%,−80%	
C3	C	±20%	−25 to +85℃
		+15%,−30%	+85 to +125℃
R3	R	±15%	−25 to +85℃
		+15%,−30%	+85 to +125℃
1X	SL	+350 to −1000ppm/℃	+20 to +85℃

❹Rated Voltage

Code	Rated Voltage
2E	DC250V
2H	DC500V
3A	DC1kV
3D	DC2kV
3F	DC3.15kV
3J	DC6.3kV

❺Capacitance

Expressed by three figures. The unit is pico-farad(pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

❻Capacitance Tolerance

Code	Capacitance Tolerance
J	±5%
K	±10%
Z	+80%, −20%

❼Lead Style

Code	Lead Style	Dimensions(mm)		
		Lead Spacing	Lead Diameter	Pitch of Components
A2	Vertical Crimp Long	5	ø0.6±0.05	−
A3		7.5		
A4		10		
B2	Vertical Crimp Short	5	ø0.6±0.05	−
B3		7.5		
B4		10		
C1	Straight Long	5	ø0.5±0.05	−
C3		7.5	ø0.6±0.05	
C4		10		
CD		7.5	ø0.5±0.05	
D1	Straight Short	5	ø0.5±0.05	−
D3		7.5	ø0.6±0.05	
DD		7.5	ø0.5±0.05	
N2	Vertical Crimp Taping	5	ø0.6±0.05	12.7
N3		7.5		15
N7		7.5		30
P2	Straight Taping	5	ø0.6±0.05	12.7
P3		7.5		15

❽Packaging

Code	Packaging
A	Ammo Pack
B	Bulk

Safety Standard Recognized Ceramic Capacitors

(Global Part Number) | DE | 2 | E3 | KH | 102 | M | N3 | A | | |
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
DE	High-voltage (250V - 6.3kV) / Safety Standard Recognized Ceramic Capaictors

❷Series Category

Code	Outline	Contents
1	Safety Standard Recognized	IEC60384-14 Class X1, Y1
2		IEC60384-14 Class X1, Y2
J	AC250V (r.m.s.)	"Products which are based on the Electrical Appliance and Material Control Law of Japan"

In case of Electrical Appliance and Material Control Law of Japan, first three digit (❶Product ID and ❷Series Category) express "Series Name".
In case of Safety Recognized Capacitors, first three digit express product code. The following forth figure expresses recognized type shown in ❹Safety Standard Recognized type column.

❸Temperature Characteristics

Code	Temperature Characteristics	Cap.Change or Temp. Coeff.	Temperature Range
B3	B	±10%	−25 to +85℃
E3	E	+20%,−55%	
F3	F	+30%,−80%	
1X	SL	+350 to −1000ppm/℃	+20 to +85℃

❹Rated Voltage/Safety Standard Recognized Type

Code	Rated Voltage
E2	AC250V
KH	X1, Y2; AC250V, (Safety Standard Recognized Type KH)
KY	X1, Y2; AC250V, (Safety Standard Recognized Type KY)
KX	X1, Y1; AC250V, (Safety Standard Recognized Type KX)

❺Capacitance

Expressed by three figures. The unit is pico-farad(pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers.
If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

❻Capacitance Tolerance

Code	Capacitance Tolerance
K	±10%
M	±20%
Z	+80%, −20%

❼Lead Style

Code	Lead Style	Dimensions(mm)		
		Lead Spacing	Lead Diameter	Pitch of Components
A2	Vertical Crimp Long	5	ø0.6±0.05	—
A3		7.5		
A5		10	ø0.6+0.1,−0.05	
B2	Vertical Crimp Short	5	ø0.6±0.05	—
B3		7.5		
B5		10	ø0.6+0.1, −0.05	
C3	Straight Long	7.5	ø0.6±0.05	—
D3	Straight Short	7.5	ø0.6±0.05	—
N2	Vertical Crimp Taping	5	ø0.6±0.05	12.7
N3		7.5		15
N5		10	ø0.6+0.1, −0.05	25.4
N7		7.5	ø0.6±0.05	30
P3	Straight Taping	7.5	ø0.6±0.05	15

❽Packaging

Code	Packaging
A	Ammo Pack
B	Bulk

❾Individual Specification

In case part number cannot be identified without "Individual Specification", it is added at the end of part number.

Code	Individual Specification	Application
A01	Small size	Type KX
M01	New marking, Dielectric strength : AC2000V	Type KY

High-voltage Ceramic Capacitors (over 10kV)

(Global Part Number) **DH** **R** **B3** **4A** **101** **M** **2B** **B**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
DH	High-voltage Ceramic Capacitors (over 10kV)

❷Series Category

Code	Contents
R	Radial Type
S	Mold Type

First three digit of part number (❶Product ID and ❷Series Category) express "Series Name".

❸Temperature Characteristics

Code	Temp. Char.	Cap. Change or Temp. Coeff.	Temp. Range
B3	**B**	±10%	−25 to +85℃
F4	**Z5V**	+22%, −82%	+10 to +85℃
4E	**ZM**	−4700±1000ppm/℃	+20 to +85℃
	N4700		

❹Rated Voltage

Code	Rated Voltage
4A	DC10kV
4B	DC12kV
4C	DC15kV
4D	DC20kV
4F	DC30kV
4G	DC40kV

❺Capacitance

Expressed by three figures. The unit is pico-farad(pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers.
If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

❻Capacitance Tolerance

Code	Capacitance Tolerance
K	±10%
M	±20%
Z	+80%, −20%

❼Lead Type (**DHR** Series)

Code	Lead Type	Lead Spacing	Lead Diameter
2B	Straight Long	9.5mm	ø0.65mm
2F		12.7mm	ø0.8mm

❼Body Diameter and Terminal Type (**DHS** Series)

Code	Body Diameter	Terminal Type
CX	20mm	No.8-32 Tapped Holes
DX	24mm	
HX	30mm	
LX	38mm	
NX	43mm	
RX	52mm	
TX	60mm	

❽Packaging

Code	Packaging
B	Bulk

High-frequency Power Ceramic Capacitors

(Global Part Number) **DC** **T** **3U** **AF** **501** **K** **B4** **B**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
DC	High-frequency Power Ceramic Capacitors

❷Series Categoly

Code	Contents
A	Disc Type
T	Flange Type
W	Water-cooling Type
5	Small Type
6	Small Size Feed-thru Type

First three digit of part number (❶Product ID and ❷Series Category) express "Series Name".

❸Temperature Characteristics

Code	Temp. Char.	Cap. Change or Temp. Coeff.	Temp. Range
F3	**F**	+30%, −80%	−25 to +85℃
2A	**AH**	+100±60ppm/℃	
2C	**CH**	0±60ppm/℃	
3U	**UJ**	−750±120ppm/℃	

❹Rated Voltage

Code	Rated Voltage
D3	HF2kV
AT	HF9kV
B4	HF12kV
AF	HF14kV
C4	HF15kV
AX	HF16kV
D4	HF20kV
E4	HF25kV
F4	HF30kV
AZ	HF31.5kV
3D	DC2kV
3G	DC4kV
3H	DC5kV
AD	DC7.5kV
4C	DC15kV

❺Capacitance

Expressed by three figures. The unit is pico-farad(pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

❻Capacitance Tolerance

Code	Capacitance Tolerance
D	±0.5pF
K	±10%
M	±20%
P	+100%, −0%

❼Shape

Code	Shape	Application
A2	Dia. 40mm	**DCA** Series
B3	Dia. 60mm	**DCT** Series
B4	Dia. 80mm	
B5	Dia. 110mm	
B6	Dia. 140mm	
B8	Dia. 200mm	
C1	Dia. 12mm	**DC5** Series
C3	Dia. 6.3mm	
C4	Dia. 30mm	
C6	Dia. 20mm	
C8	Dia. 20mm	
E1	Dia. 40mm	**DC6** Series
E2	Dia. 60mm	
F1	Dia. 100mm	**DCW** Series
F2	Dia. 125mm	
F3	Dia. 135mm	

❽Packaging

Code	Packaging
B	Bulk

Ceramic Trimmer Capacitors

(Global Part Number) **TZ** ❶ **Y2** ❷ **R** ❸ **200** ❹ **A** ❺ **001** ❻ **R00** ❼

❶Product ID

Product ID	
TZ	Trimmer Capacitors

❷Series/Terminal

Code	Series/Terminal
03	6mm Size Lead Type
B4	4mm Size Chip/Lead Type
C3	3mm Size Chip Type
S2	2mm Size Chip Type (Height 1.0mm)
Y2	2mm Size Chip Type (Height 1.25mm)
V2	2mm Size Chip Type (Height 1.45mm)
R1	1mm Size Chip Type (Height 0.90mm)

❸Temperature Characteristics

Code	Temperature Characteristics
Z	NP0 ppm/°C
S	N150ppm/°C
N	N200ppm/°C
T	N450ppm/°C
R	N750ppm/°C
K	N1000ppm/°C
P	N1200ppm/°C

Please refer to ratings for tolerance of temperature characteristics.

❹Maximum Capacitance

Expressed by three figures. The unit is pico-farad(pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

❺Terminal Shape

Code	Terminal Shape
A	Top Adjustment; **TZR1**,**TZS2**,**TZY2**, **TZV2**,**TZC3**,**TZB4** (Chip Type)
B	Top Adjustment; **TZB4** (Chip Type), Rear Adjustment; **TZ03** (Lead Type)
C	Top Adjustment; **TZB4** (Lead Type)
D	Rear Adjustment; **TZB4** (Lead Type)
E	Top Adjustment; **TZ03** (Lead Type), Rear Adjustment; **TZB4** (Chip Type)
F	Top Adjustment; **TZ03** (Lead Type)
N	Rear Adjustment; **TZ03** (Lead Type)
T	Top Adjustment; **TZ03** (Taping Type)
Y	Side Adjustment; **TZ03** (Lead Type)

Please refer to dimensions for terminals in detail.

❻Individual Specification

Code	Individual Specifications
001	**TZR1**,**TZS2**,**TZY2** Standard Type
110	**TZV2**,**TZC3** (Minus Slot) Standard Type
169	**TZ03** Standard Type
310	**TZC3** (Plus Slot) Standard Type
A10	**TZB4** No-cover Film Standard Type
B10	**TZB4** with Cover Film Standard Type

❼Packaging

Code	Packaging
A00	Ammo Pack (Radial Taping)
B00	Bulk
M00	Magazine
R00	Reel (Taping ø180mm)
R01	Reel (Taping ø330mm)

C Networks (Bulk)

(Global Part Number) **B** **5** **RC** **0127** **-33N**
❶ ❷ ❸ ❹ ❺

❶Product ID

Product ID	
B	C Network Bulk

❷Number of Terminals

Code	Number of Terminals
5	5 Terminals (4 Elements)
7	7 Terminals (6 Elements)
8	8 Terminals (7 Elements)
9	9 Terminals (8 Elements)

❸Appearance/Structure

Code	Appearance/Structure
RC	Unit Size; 15.3×9.5mm
ZC	Unit Size; 19.8×9.5mm
XC	Unit Size; 21.0×8.0mm
HC	Unit Size; 24.0×9.5mm

❹Serial Number

❺Terminal Structure

Code	Terminal Structure
-33N	2.5mm Pitch, Straight

C Networks (Small Taping Type)

(Global Part Number) **CG** **SD** **8** **X** **102** **M** **-T21**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
CG	C Network Low-Profile

❷Structure

Code	Structure
SD	Terminal Pitch:2.54mm, Height:6.5mm max.

❸Number of Elements

Code	Number of Elements
4	4 Elements
6	6 Elements
8	8 Elements

❹Circuit

Code	Circuit
X	Pull up, Pull down Circuit

❺Capacitance

Expressed by three figures. The unit is pico-farad(pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers.

Ex.)

Code	Capacitance
101	100pF
103	10000pF

❻Capacitance Tolerance

Code	Capacitance Tolerance
M	±20%
N	±30%

❼Pakaging

Code	Pakaging
-T21	Three-pins, Taping

● Part Numbering

PTC Thermistors (POSISTOR®) for Heater

(Global Part Number) **PT** **WSB1** **AS** **201** **T** **260** **A00**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
PT	PTC Thermistors

❷Series

Code	Series
WSB1	Heater Standard Type B1 Series
WSB2	Heater Standard Type B2 Series
WTA1	High-temperature Heater A1 Series

❸Temperature Characteristics

Code	Temperature Characteristics
AD	Curie Point 280°C
AG	Curie Point 225°C
AH	Curie Point 205°C
AS	Curie Point 135°C
BC	Curie Point 90°C

❹Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
201	200Ω

❺Resistance Tolerance

Code	Resistance Tolerance
Y	Special Tolerance

❻Maximum Voltage

Code	Maximum Voltage
260	260V

❼Individual Specifications

Code	Individual Specifications
A00	Structure, others

PTC Thermistors (POSISTOR®) for Circuit Protection

(Global Part Number) **PR** **G** **18** **BB** **470** **M** **B1** **RB**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
PR	PTC Thermistors Chip Type

❷Series

Code	Series
G	for Overcurrent Protection

❸Dimensions (L×W)

Code	Dimensions (L×W)
18	1.60×0.80

❹Temperature Characteristics

Code	Temperature Characteristics
BB	Curie Point 100°C

❺Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
470	47Ω
471	470Ω

❻Resistance Tolerance

Code	Resistance Tolerance
M	±20%
Q	Special Tolerance

❼Individual Specifications

Code	Individual Specifications
B1	Structure, others

❽Packaging

Code	Packaging
RB	Paper Taping (4mm Pitch)

PTC Thermistors (POSISTOR®) for Circuit Protection SMD Type

(Global Part Number) **PD** **G** **A8** **AR** **200** **M** **A0** **RS**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
PD	PTC Thermistors SMD Type

❷Series

Code	Series
G	for Overcurrent Protection

❸Dimensions (L×W)

Code	Dimensions (L×W)
A0	Special (10.0×8.0mm)

❹Temperature Characteristics

Code	Temperature Characteristics
AR	Curie Point 120°C
BB	Curie Point 100°C

❺Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
100	10Ω
200	20Ω

❻Resistance Tolerance

Code	Resistance Tolerance
M	±20%

❼Individual Specifications

Code	Individual Specifications
A0	Structure, others

❽Packaging

Code	Packaging
RS	Plastic Taping 12mm Pitch

PTC Thermistors (POSISTOR®) for Overheat Sensing Chip Type

(Global Part Number) **PR** **F** **18** **BB** **471** **Q** **B1** **RB**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
PR	PTC Thermistors Chip Type

❷Series

Code	Series
F	for Overheat Sensing

❸Dimensions (L×W)

Code	Dimensions (L×W)
18	1.60×0.80

❹Temperature Characteristics

Code	Temperature Characteristics
AR	Curie Point 120°C
AS	Curie Point 130°C
BA	Curie Point 110°C
BB	Curie Point 100°C
BC	Curie Point 90°C
BD	Curie Point 80°C
BE	Curie Point 70°C

❺Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
471	470Ω

❻Resistance Tolerance

Code	Resistance Tolerance
Q	Special Tolerance

❼Individual Specifications

Code	Individual Specifications
B1	Structure, others

❽Packaging

Code	Packaging
RB	Paper Taping (4mm Pitch)

PTC Thermistors (POSISTOR®) for Circuit Protection / for Overheat Sensing Lead Type

(Global Part Number)

❶	❷	❸	❹	❺	❻	❼	❽
PT	GL	07	AR	220	M	3P51	A0

❶Product ID

Product ID	
PT	PTC Thermistors

❷Series

Code	Series
FL	for Overheat Sensing Lead Type
FM	for Overheat Sensing with Lug-terminal
GL	for Circuit Protection Lead Type

❸Dimensions

Code	Dimensions
04	Nominal Body Dimameter 4mm Series
05	Nominal Body Dimameter 5mm Series
07	Nominal Body Dimameter 7mm Series
09	Nominal Body Dimameter 9mm Series
10	Nominal Body Dimameter 10mm Series
12	Nominal Body Dimameter 12mm Series
13	Nominal Body Dimameter 13mm Series
14	Nominal Body Dimameter 14mm Series
16	Nominal Body Dimameter 16mm Series
18	Nominal Body Dimameter 18mm Series
S5	Nominal 5mm Rectangular Series
S6	Nominal 6mm Rectangular Series
S7	Nominal 7mm Rectangular Series

❹Temperature Characteristics

Code	Temperature Characteristics
AR	Curie Point 120°C
BA	Curie Point 110°C
BB	Curie Point 100°C
BC	Curie Point 90°C
BD	Curie Point 80°C
BE	Curie Point 70°C
BF	Curie Point 60°C
BG	Curie Point 50°C
BH	Curie Point 40°C

❺Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
R22	0.22Ω
2R2	2.2Ω
220	22Ω

❻Resistance Tolerance

Code	Resistance Tolerance
H	±25%
N	±30%
M	±20%
Q	Special Tolerance

❼Individual Specifications

Code	Individual Specifications
3P51	Lead Type, others

❽Packaging

Code	Packaging
A0	Ammo Pack
B0	Bulk

PTC Thermistors (POSISTOR®) for Motor Starters

(Global Part Number) **PT** **HGA1** **AR** **100** **N** **225** **-00**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
PT	PTC Thermistors

❷Series

Code	Series
HGA1	for Motor Starter Case Type

❸Temperature Characteristics

Code	Temperature Characteristics
AR	Curie Point 120°C

❹Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
3R3	3.3Ω
330	33Ω

❺Resistance Tolerance

Code	Resistance Tolerance
N	±30%

❻Maximum Voltage

Code	Maximum Voltage
225	Expressed by three significant digits. The unit is in volts (V).

❼Individual Specifications

Code	Individual Specifications
-00	Structure, others

PTC Thermistors (POSISTOR®) for Motor Starter Plug-on Type

(Global Part Number) **PT** **H7M** **100** **M** **C1** **-00**
❶ ❷ ❸ ❹ ❺ ❻

❶Product ID

Product ID	
PT	PTC Thermistors

❷Series

Code	Series
H7M	for Motor Starter Plug-on Type (Size ø16mm)
H8M	for Motor Starter Plug-on Type (Size ø20mm)

❸Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
4R7	4.7Ω
470	47Ω

❹Resistance Tolerance

Code	Resistance Tolerance
M	±20%

❺Starting Circuit

Code	Starting Circuit
B3	Starting Circuit : CSR 3Pin
C1	Starting Circuit : RSIR 1Pin
C2	Starting Circuit : RSIR 2Pin
D2	Starting Circuit : RSCR 2Pin
D3	Starting Circuit : RSCR 3Pin

Please contact us for details.

❻Individual Specifications

Code	Individual Specifications
-00	Structures, others

PTC Thermistors (POSISTOR®) for Degaussing Circuits

(Global Part Number) **PT** **DAA1** **BF** **4R5** **Q** **200**
❶ ❷ ❸ ❹ ❺ ❻

❶Product ID

Product ID	
PT	PTC Thermistors

❷Series

Code	Series
DAA1	2-terminals Case Type
DCA1	3-terminals Case Type
DL7P	Lead Type

❸Temperature Characteristics

Code	Temperature Characteristics
BF	Curie Point 60˚C

❹Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
3R0	3Ω
4R5	4.5Ω
140	14Ω

❺Resistance Tolerance

Code	Resistance Tolerance
M	±20%
N	±30%
Q	Special Tolerance

❻Individual Specifications

Code	Individual Specifications
100	1st Digit : Voltage (100V Type) 2nd-3rd Digits : Others
200	1st Digit : Voltage (200V Type) 2nd-3rd Digits : Others

Please contact us for details.

NTC Thermistors for Temperature Compensation Chip Type

(Global Part Number) **NC** **P** **18** **XH** **103** **J** **03** **RB**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
NC	NTC Thermistors Chip Type

❷Series

Code	Series
P	Plated Termination Series

❸Dimensions (L×W)

Code	Dimensions (L×W)	EIA
03	0.60×0.30mm	0201
15	1.00×0.50mm	0402
18	1.60×0.80mm	0603
21	2.00×1.25mm	0805

❹Temperature Characteristics

Code	Temperature Characteristics
WB	Nominal B-Constant 4050—4099K
WD	Nominal B-Constant 4150—4199K
WF	Nominal B-Constant 4250—4299K
WM	Nominal B-Constant 4500—4549K
XF	Nominal B-Constant 3250—3299K
XQ	Nominal B-Constant 3650—3699K
XH	Nominal B-Constant 3350—3399K
XM	Nominal B-Constant 3500—3549K
XV	Nominal B-Constant 3900—3949K
XW	Nominal B-Constant 3950—3999K

❺Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
102	1kΩ
103	10kΩ
104	100kΩ

❻Resistance Tolerance

Code	Resistance Tolerance
F	±1%
J	±5%
K	±10%

❼Individual Specifications

Code	Individual Specifications
03	Sturcture, others

Please contact us for details.

❽Packaging

Code	Packaging
RA	Plastic Taping 8mm Pitch
RB	Paper Taping 4mm Pitch
RC	Paper Taping 2mm Pitch (10000 pcs.)
RD	Paper Taping 2mm Pitch (15000 pcs.)

NTC Thermistors for Temperature Sensor Lead Type

(Global Part Number) **NT** **SA0** **XH** **103** **F** **E1** **B0**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
NT	NTC Thermistors

❷Series

Code	Series
SA0	for Temperature Sensors No Lead-coating Type
SD0	for Temperature Sensors Lead-coating Type

❸Temperature Characteristics

Code	Temperature Characteristics
WB	Nominal B-Constant 4050−4099K
WC	Nominal B-Constant 4100−4149K
WD	Nominal B-Constant 4150−4199K
WF	Nominal B-Constant 4250−4299K
XM	Nominal B-Constant 3500−3549K
XH	Nominal B-Constant 3350−3399K
XR	Nominal B-Constant 3700−3749K
XV	Nominal B-Constant 3900−3949K

❹Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
202	2kΩ
203	20kΩ

❺Resistance Tolerance

Code	Resistance Tolerance
E	±3%
F	±1%

❻Individual Specifications

Code	Individual Specifications
E1	Lead Style, others

❼Packaging

Code	Packaging
A0	Ammo Pack
B0	Bulk

NTC Thermistors for Inrush Current Suppression

(Global Part Number) **NT** **PA7** **160** **L** **BM** **B0**
❶ ❷ ❸ ❹ ❺ ❻

❶Product ID

Product ID	
NT	NTC Thermistors

❷Series

Code	Series	Nominal Body Diameter
PA7	Inrush Current Suppression Lead Type	7mm
PAA		10mm
PAD		13mm
PAJ		18mm
PAN		22mm

❸Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
3R0	3Ω
100	10Ω

❹Resistance Tolerance

Code	Resistance Tolerance
L	±15%

❺Individual Specifications

Code	Individual Specifications
BM	Lead Style, others

❻Packaging

Code	Packaging
A0	Ammo Pack
B0	Bulk

High-voltage Resistors

(Global Part Number)

MHR	0409	S	A	107	J	60	T7
❶	❷	❸	❹	❺	❻	❼	❽

❶Product ID

Product ID	
MHR	High-voltage Resistors

❷Board (W×L) Dimensions

Ex.)

Code	Dimensions
0409	4×9mm
0609	6×9mm
0830	8×30mm

❸Type

Code	Type
S	Hoop Terminal, Blue Epoxy Resin
P	øpin, Semitransparent Epoxy Resin

❹Circuit

Code	Circuit
A	Single Element
B	Two Elements, Series Circuit

❺Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two figures.

Ex.)

Code	Resistance
406	40MΩ
207	200MΩ

❻Resistance Tolerance

Code	Resistance Tolerance
G	±2%
J	±5%
K	±10%
M	±20%

❼Individual Specifications

Two digits indicate other specifications.

❽Packaging

Code	Packaging
T7	Taping

R Network

(Global Part Number)

X, Y, L Circuit

RG	LD	8	X	103	J		T2
❶	❷	❸	❹	❺	❻		❾

Z, M Circuit

RG	LD	8	M	103	J	104	J	T2
❶	❷	❸	❹	❺	❻	❼	❽	❾

❶Product ID

Product ID	
RG	R Networks

❷Structure

Code	Structure
LD	Terminal Pitch : 2.54mm, Height : 5.0mm max.
LE	Terminal Pitch : 1.78mm, Height : 5.0mm max.
SD	Terminal Pitch : 2.54mm, Height : 6.5mm max.

❸Number of Element

Code	Number of Element
8	1 or 2 digits shows the number of element.

❹Circuit

Code	Circuit
X	Pull-up, Pull-down Circuit
Y	Isolated Circuit
Z	Double Terminator Circuit
M	Divider Circuit
L	R/2R Ladder Circuit

❺Nominal Resistance (Z, M Circuit : R_A)

Expressed by three figures. The unit is ohm (Ω). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two figures.

Ex.)

Code	Nominal Resistance
150	15Ω
103	10kΩ

❻Resistance Tolerance (Z, M Circuit : R_A)

Code	Resistance Tolerance
J	±5%
G	±2%(22Ω min.)

❼Nominal Resistance (Z, M Circuit : R_B)

Expressed by three figures. The unit is ohm (Ω). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two figures.

Ex.)

Code	Nominal Resistance
150	15Ω
104	100kΩ

If R_A and R_B values are the same, ❼ and ❽ remain blanks, and the corresponding code is omitted.

❽Resistance Tolerance (Z, M Circuit : R_B)

Code	Resistance Tolerance
J	±5%
G	±2%(22Ω min.)

❾Packaging

Code	Packaging
T2	3pins Taping

Trimmer Potentiometers

(Global Part Number) **PV** ❶ **Z3** ❷ **A** ❸ **103** ❹ **A01** ❺ **R00** ❻

❶Product ID

Product ID	
PV	Trimmer Potentiometers

❷Series

❸Lead Type /Adjustment Direction

Code	Series	Code	Lead Type/ Adjustment Direction
Z2	2mm Size	**A**	Top
		K	Rear
Z3	3mm Size	**A**	Top
		K	Rear
S3	3mm Size with Stopper Low-profile	**A**	Top
A3	3mm Size	**A**	Top
M4	Closed 4mm Size	**A**	Top
F2	Closed 2mm Size	**A**	Top
G3	Closed 3mm Size	**A**	Top, J-hook
		G	Top, Gull-wing
G5	SMD 11-turns 5 Size	**A**	Top
		H	Side
01	SMD 12-turns	**P**	Side
		W	Top
		X	Side
C6	Single-turn Closed Type 6mm Size	**A**	Top, Triangle
		D	Top, Triangle
		E	Side , Triangle
		G	Side , Triangle
		H	Side , Triangle
		M	Top, Inline
		Q	Side , Inline
32	Single-turn Closed Type 6mm Size	**H**	Top, Triangle
		P	Top, Triangle
		R	Top, Inline
		N	Side , Triangle
		T	Side , Triangle
		S	Side , Triangle
34	Single-turn Closed Type	**F**	Top, Triangle
		P	Top, Triangle
		H	Side , Triangle
		X	Side , Triangle
		W	Side , Inline
12	4-turn Closed Type	**H**	Top, Triangle
		P	Top, Triangle
		T	Side , Triangle
		S	Side , Triangle
22	22-turn Closed Type	**L**	Side
		S	Side , Inline
		Y	Side , Triangle
23	15-turn Closed Type	**P**	Side , Triangle
		Y	Side , Triangle
36	25-turn Closed Type	**W**	Top, Inline
		Y	Top, Triangle
		P	Side , Triangle
		X	Side , Inline
		Z	Side , Triangle
37	12-turn Closed Type	**W**	Top, Triangle
		Y	Top, Inline
		P	Side , Triangle
		X	Side , Triangle
		Z	Side , Inline

❹All Resistance

Expressed by three figures. The unit is ohm. The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two figures.

Ex.)

Code	All Resistance
100	100ohm
102	1000ohm
104	100000ohm (=100kohm)

❺Individual Specification Code

Code	Series	Individual Specification Code
A01	—	Standard
B01	**PVZ3**	Heat-resitance Type
B01	**PVM4**	High-liability Type
A31	**PV36/PV37**	Radial Taping
A04	**PVC6**	Radial Taping
A11	**PVF2**	Starndard Type (Resistance Change Characteristics : Lenear)
A41	**PVF2**	Starndard Type (Resistance Change Characteristics : Log curve)
A81	**PVF2**	Starndard Type (Resistance Change Characteristics : Log curve)
A51	**PVF2**	Starndard Type (Resistance Change Characteristics : Log-log curve)
A91	**PVF2**	Starndard Type (Resistance Change Characteristics : Log-log curve)

❻Packaging

Code	Packaging
A00	Ammo Pack
B00	Bulk
M00*	Magazine
R00	Reel

***** M02 for PV01 series

● Part Numbering

Chip Coils (SMD)

(Global Part Number) LQ H 32 M N 331 K 2 1 L

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶Product ID

Product ID	
LQ	Chip Coils

❷Structure

Code	Structure
G	Monolithic Type (Air-core Coil)
H	Winding Type (Ferrite Core)
M	Monolithic (Ferriet Core)
P	Film Type
W	Winding Type (Air-core Coil)

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
03	0.60×0.30mm	0201
15	1.00×0.50mm	0402
18	1.60×0.80mm	0603
21	2.00×1.25mm	0805
2B	2.00×1.50mm	0805
31	3.20×1.60mm	1206
32	3.20×2.50mm	1210
3E	3.50×3.20mm	1214
3K	3.30×3.30mm	1212
43	4.50×3.20mm	1812
55	5.70×5.00mm	2220
66	6.30×6.30mm	2525

❹Applications and Characteristics

Code	Series	Applications and Characteristics
H	**LQG**	Monolithic Air-core
N	**LQM**	for Resonant Circuit
D		for Choke (Low-current DC Power Supplies)
F		for Choke (DC Power Supplies)
M	**LQP**	Film Type
T		Film Type (Low DC Resistance Type)
A	**LQW**	High Q Type (UFH-SHF)
H		High Q Type (VHF-UHF)
N	**LQH**	for Resonant Circuit
M		for Resonant Circuit (Coating Type)
R		for Resonant Circuit (Magnetically Shielded Type)
D		for Choke
C		for Choke (Coating Type)
S		for Choke (Magnetically Shielded Type)
H		for High-frequency Resonant Circuit

❺Category

Code	Category
N	Standard Type

❻Inductance

Expressed by three figures. The unit is micro-henry (μH). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures. If there is a decimal point, it is expressed by capital letter "**R**". In this case, all figures are significant digits. If inductance is less than 0.1μH, the inductance code is expressed by combination of two figures are capital letter "**N**", and the unit of inductance is nano-henry (nH).
Capital letter "**N**" indicates the unit of "nH", and also expresses a decimal point. In this case, all figure are significant digits.

❼Inductance Tolerance

Code	Inductance Tolerance
B	±0.1nH
C	±0.2nH
D	±0.5nH
G	±2%
H	±3%
J	±5%
K	±10%
M	±20%
N	±30%
S	±0.3nH
W	±0.05nH

❽Features

Expressed by a figure from "0" to "2".

Ex.)

Code	Fetures
0	Standard Type

❾Electrode

Code	Electrode
0	Solder etc
1	Ni alloy + Solder
2	Sn

Continued on the following page.

Continued from the preceding page.

(Global Part Number) LQ H 32 M N 331 K 2 1 L
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❿Pakaging

Code	Pakaging	Series
K	Plastic Taping (ø330mm Reel)	**LQM***1 **/LQH***2 **/LQW2B**
L	Plastic Taping (ø180mm Reel)	**LQH/LQM***3
B	Bulk	All series exept **LQH/LQW2B/LQW31/LQP03**
J	Paper Taping (ø330mm Reel)	**LQG/LQM***4 **/LQW***5
D	Paper Taping (ø180mm Reel)	**LQG/LQP/LQM***6

*1 LQM31F/LQM21N(2.7 - 4.7µH)/LQM21D(22 - 47µH)/LQM21F(4.7 - 47µH) series only.
*2 Except LQH3ER/LQH43C/LQH66S
*3 LQM31F/LQM21N(2.7 - 4.7µH)/LQM21D(22 - 47µH)/LQM21F(4.7 - 47µH) series only.
*4 LQM21N(0.1 - 2.2µH)/LQM21D(1 - 10µH)/LQM21F(1 - 2.2µH) series only.
*5 Except LQW15A
*6 LQM21N(0.1 - 2.2µH)/LQM21D(1 - 10µH)/LQM21F(1 - 2.2µH) series only.

Chip Multilayer Delay Lines

(Global Part Number) LD H 65 100P A A A -400
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
LD	Chip Multilayer Devices

❷Function

Code	Function
H	Delay Lines

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
21	2.00×1.25mm	0805
31	3.20×1.60mm	1206
32	3.20×2.50mm	1210
54	5.00×4.00mm	–
65	6.30×5.00mm	–
A2	10.0×6.3mm	–

❹Delay Time

Three figures and a capital letter express the nominal value. If the unit is "nano-second", a decimal point is expressed by the capital letter "**N**". If the unit is "pico-second", the letter "**P**".

❺Delay Time Tolerance

Code	Delay Time Tolerance
A	±0.05ns
B	±0.1ns
C	±0.2ns
K	±10%
L	±15%

❻Individual Specification Code (1)

Code	Individual Specification Code (1)
A	Standard

❼Design

Code	Design
A	An alphabet expresses identification of design type for each function.

❽Individual Specification Code (2)

A hyphen (-), figures, alphabets, express the specifications or characteristics or others.

● Part Numbering

Chip EMIFIL® Inductor Type

(Global Part Number) **BL** **M** **18** **AG** **102** **S** **N** **1** **D**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
BL	Chip Ferrite Beads

❷Type

Code	Type
A	Array Type
M	Monolithic Type

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
15	1.00×0.50mm	0402
18	1.60×0.80mm	0603
21	2.00×1.25mm	0805
31	3.20×1.60mm	1206
41	4.50×1.60mm	1806

❺Impedance

Expressed by three figures. The unit is in ohm (Ω). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two figures.

❻Performance

Expressed by an alphabet.

Ex.)

Code	Performance
S	Sn Plating

❼Category

Code	Category
N	Standard Type
H	for Automotive Electoronics

❽Numbers of Circuit

Code	Numbers of Circuit
1	1Circuit
4	4Circuit

❹Characteristics/Applications

Code *1	Characteristics/Applications	Series
AF	for General Use	**BLM31/BLM41**
AG		**BLM15/BLM18/BLM21/BLM31/BLA31**
AJ		**BLM21/BLM31**
AH		**BLM21**
BA	for High-speed Signal Lines	**BLM18**
BB		**BLM15/BLM18/BLM21**
BD		**BLM15/BLM18/BLM21/BLA31**
BE		**BLM31**
PF	for Power Supplies	**BLM41**
PG		**BLM18/BLM21/BLM31/BLM41**
RK	for Digital Interface	**BLM18/BLM21**
HG	for GHz Band General Use	**BLM18**
HD	for GHz Band High-speed Signal Line	**BLM18**
HK	for GHz Band Digital Interface	**BLM18**

*1 Frequency characteristics is varied with each code.

❾Packaging

Code	Packaging	Series
K	Plastic Taping (ø330mm Reel)	**BLM31/BLM41/BLM21** *1
L	Plastic Taping (ø180mm Reel)	
B	Bulk	All series
J	Paper Taping (ø330mm Reel)	**BLM15/BLM18/BLM21***2 **/BLA31**
D	Paper Taping (ø180mm Reel)	
C	Bulk Case	**BLM15/BLM18**

*1 BLM21BD222SN1/BLM21BD272SN1/BLM21BD252SN1 only.
*2 Except BLM21BD222SN1/BLM21BD272SN1/BLM21BD252SN1

Chip EMIFIL® Capacitor Type

(Global Part Number) **NF** ❶ **M** ❷ **3D** ❸ **CC** ❹ **102** ❺ **R** ❻ **1H** ❼ **3** ❽ **L** ❾

❶Product ID

Product ID	
NF	Chip EMI Filters Capacitor Type

❷Structure

Code	Structure
M	Capacitor Type

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
21	2.00×1.25mm	0805
3D	3.20×1.25mm	1206
41	4.50×1.60mm	1806
55	5.70×5.00mm	2200

❹Features

Code	Features
CC	Capacitor Type for Signal Lines
PC	Capacitor Type for Large Current
HC	Capacitor Type for Automotive Electronics

❺Capacitance

Expressed by three figures. The unit is in pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures.

❻Capacitance Change

Code	Capacitance Change
B	±10%
F	+30/-80%
R	±15%
U	-750 ±120ppm
S	+350 to -1000ppm

❼Rated Voltage

Code	Rated Voltage
1A	10V
1C	16V
1E	25V
1H	50V
2A	100V

❽Electrode/Others

Expressed by a figure.

Ex.)

Code	Electrode
3	Sn Plating
4	Solder Coating
9	Others

❾Packaging

Code	Packaging	Series
L	Plastic Taping (ø180mm Reel)	**NFM3D/NFM41/NFM55**
B	Bulk	All series
D	Paper Taping (ø180mm Reel)	**NFM21**

Chip EMIFIL® Capacitor Array Type

(Global Part Number) **NF** **A** **31** **CC** **101** **S** **1E** **4** **B**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
NF	Chip EMI Filters Capacitor Type

❷Structure

Code	Structure
A	Array Type

❸Dimension (L×W)

Code	Dimension (L×W)
31	3.20×1.60mm

❹Features

Code	Features
CC	Capacitor Type for Signal Lines

❺Capacitance

Expressed by three figures. The unit is in pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures.

❻Capacitance Change

Code	Capacitance Change
R	±15%
S	+350 to -1000ppm

❼Rated Voltage

Code	Rated Voltage
1C	16V
1E	25V

❽Numbers of Circuit

Code	Number of Circuit
4	4 circuit

❾Packaging

Code	Packaging
B	Bulk
D	Paper Taping (ø180mm Reel)

Chip EMIFIL® LC Combined Type

(Global Part Number) **NF** **W** **31** **SP** **206** **X** **1E** **4** **L**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
NF	Chip EMI Filters LC Combined Type

❷Structure

Code	Structure
L	Monolithic, LC Combined Type
W	Winding, LC Combined Type
E	Block, LC Combined Type

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
21	2.0×1.25mm	0805
31	3.20×1.60mm	1206
61	6.80×1.60mm	2606

❹Features

Code	Features
SP	π Circuit for Signal Lines
PT	T Circuit for Large Current
HP	π Circuit for Automotive Electronics
HT	T Circuit for Automotive Electronics

❺Cut-off Frequency (NFL/NFW Series)

Expressed by three figures. The unit is in hertz (Hz). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two figures.

❺Capacitance (NFE Series)

Expressed by three figures. The unit is in pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures.

❻Characteristics (NFL/NFW Series)

Code	Characteristics
X	Cut off Frequency

❻Capacitance Change (NFE Series)

Code	Capacitance Change
B	±10%
C	±20%, ±22%
D	+20/-30%, +22/-33%
E	+20/-55%, +22/-56%
F	+30/-80%, +22/-82%
R	±15%
U	-750 ±120ppm/ ˚C
Z	Other

❼Rated Voltage

Code	Rated Voltage
1C	16V
1E	25V
1H	50V
2A	100V

❽Electrode

Expressed by a figure.

Ex.)

Code	Electrode
0	Ag / Pd Outer Electrode
3	Sn Plating
4	Solder Coating
9	Others

❾Packaging

Code	Packaging	Series
K	Plastic Taping (ø330mm Reel)	**NFW31/NFE**
L	Plastic Taping (ø180mm Reel)	**NFW31/NFE**
B	Bulk	**NFL21/NFE**
D	Paper Taping (ø180mm Reel)	**NFL21**

Chip EMIFIL® RC Combined Type

(Global Part Number) **NF** **R** **21** **GD** **470** **470** **2** **L**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
NF	EMIFIL®

❷Structure

Code	Structure
R	RC Combined Type

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
21	2.00×1.25mm	0805

❹Features

Code	Features
GD	RC Combined Type for Signal Lines

❺Capacitance

Expressed by three figures. The unit is in pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures. If there is a decimal point, it is expressed by capital letter "**R**". In this case, all figure are significant digits.

❻Resistance

Expressed by three figures. The unit is in ohm (Ω). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures. If there is a decimal point, it is expressed by capital letter "**R**". In this case, all figures are significant digits.

❼Electrode/Others

Code	Electrode
1	Ag Plating
2	Sn Plating

❽Packaging

Code	Packaging
L	Plastic Taping (ø180mm Reel)
B	Bulk

Chip EMIFIL® RC Combined Array Type

(Global Part Number) **NF** **A** **31** **GD** **100** **101** **4** **D**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
NF	EMIFIL®

❷Structure

Code	Structure
A	Array Type

❸Dimension (L×W)

Code	Dimension (L×W)
31	3.20×1.60mm

❹Features

Code	Features
GD	RC Combined Type for Signal Lines

❺Capacitance

Expressed by three figures. The unit is in pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures. If there is a decimal point, it is expressed by capital letter "**R**". In this case, all figure are significant digits.

❻Resistance

Expressed by three figures. The unit is in ohm (Ω). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures. If there is a decimal point, it is expressed by capital letter "**R**". In this case, all figures are significant digits.

❼Numbers of Circuit

Code	Numbers of Circuit
4	4 Circuit

❽Packaging

Code	Packaging
B	Bulk
D	Paper Taping (ø180mm Reel)

Chip EMIFIL® Common Mode Choke Coils

(Global Part Number) **DL** **M** **31** **K** **N** **281** **S** **J** **2** **L**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶Product ID

Product ID	
DL	Chip Common Mode Choke Coils

❷Structure

Code	Structure
W	Monolithic Type
M	Winding Type
P	Film Type

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
21	2.00×1.20mm	0805
31	3.20×1.60mm	1206
2H	2.50×2.00mm	–
5A	5.00×3.60mm	–
5B	5.00×5.00mm	–

❹Type

Code	Type
S	Magnetically Shielded One Circuit Type
D	Magnetically Shielded Two Circuit Type
H	Open Magnetic One Circuit Type
K	Magnetically Monolithic Type (bifilar winding)
G	Magnetically Monolithic Type (sectional winding)

❺Category

Code	Category
N	Standard Type

❻Impedance

Typical impedance at 100MHz is expressed by three figures. The unit is in ohm (Ω). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures.

❼Circuit

Ex.)

Code	Circuit
S	Standard Type

❽Features

Expressed by an alphabet.

❾Numbers of Signal Line

Code	Number of Signal Line
2	Two Lines
3	Three Lines
4	Four Lines

❿Packaging

Code	Packaging	Series
K	Plastic Taping (ø330mm Reel)	**DLW5AH/DLW5BS**
L	Plastic Taping (ø180mm Reel)	All series
B	Bulk	All series except **DLM2H**

Lead Type EMIFIL® Inductor Type

(Global Part Number) **BL** **02** **RN** **2** **R1** **M** **2** **B**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
BL	Ferrite Beads Inductors

❷Series

Code	Series
01	Beads ø3.6
02	Beads ø3.4
03	Beads ø2.3 max.

❸Beads Core Material

Code	Beads Core Material
RN	Standard Type

❹Numbers of Beads Core

Code	Numbers of Beads Core
1	1
2	2

❺Lead Type

Code	Lead Type
A1	Axial Straight Type
A2	Axial Crimp Type
R1	Radial Straight Type
R2	Radial Straight and wave formed Leads Type

❻Lead Length, Space

Code	Lead Length, Space
A	Bulk, Axial Type, 3.7mm
B	Bulk, Axial Type, 4.6mm
C	Bulk, Axial Type, 10.0mm
D	Bulk, Axial Type, 47.0mm
E	Taping Axial Type, 26.0mm
F	Taping, Axial Type, 52.0mm
G	Bulk, Radial Type, 3.5mm
H	Bulk, Radial Type, 4.0mm
J	Bulk, Radial Type, 5.0mm
K	Bulk, Radial Type, 6.0mm
L	Bulk, Radial Type, 8.0mm
M	Bulk, Radial Type, 10.0mm
N	Taping, Radial Type, 16.5mm
P	Taping, Radial Type, 18.5mm
Q	Taping, Radial Type, 20.0mm

❼Lead Diameter

Code	Lead Diameter
1	ø0.60mm
2	ø0.65mm

❽Packaging

Code	Packaging	Series
A	Ammo Pack	**BL01RN1A1E1A/BL02/BL03**
B	Bulk	All series
J	Corrugated Reel (ø320mm)	**BL01RN1A1F1J**

Lead Type EMIFIL® Capacitor Type

(Global Part Number) **DS** | **S** | **9** | **H** | **B3** | **2E** | **271** | **Q55** | **B**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
DS	Three-terminals Capacitor

❷Structure

Code	Structure
N	No Ferrite Beads Type
S	Built-in Ferrite Beads Type
T	with Ferrite Beads Type

❸Style

Code	Style
6	Diameter 8.0mm Type
9	Diameter 9.5mm Type

❹Category

Code	Category
N	for General Use
H	for Heavy-duty

❺Temperature Characteristics

Code	Temperature Characteristics
B3	±10% (Temperature Range : -25˚C to +85˚C)
D3	+20/-30% (Temperature Range : -25˚C to +85˚C)
E3	+20/-55% (Temperature Range : -25˚C to +85˚C)
F3	+30/-80% (Temperature Range : -25˚C to +85˚C)
Z8	+30/-85% (Temperature Range : -10˚C to +60˚C)

❻Rated Voltage

Code	Rated Voltage
1C	16V
1H	50V
2A	100V
2E	250V

❼Capacitance

Expressed by three figures. The unit is in pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures.

❽Lead Type

Code	Lead Type
Q□□	Straight Type
T□□, U□□	Others

❾Packaging

Code	Packaging	Series
A	Ammo Pack	All series except **DSS9**
B	Bulk	All series
J	Corrugated Reel (ø320mm)	**DSS9**

Lead Type Common Mode Choke Coils / AC Line Filters

(Global Part Number) **PL** **A** **10** **A** **S** **152** **2R0** **R** **2** **B**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶Product ID

Product ID	
PL	Common Mode Choke Coils

❷Type

Code	Type
T	DC Type
A	Standard Type
H	High-freqency Type
Y	Hybrid Choke Coils Type

❸Applications

Code	Applications
08	for DC Line
09	for DC Line High-frequency Type
10	for AC Line

❹Structure

Code	Structure
A	Core Vertical Type
H	Core Horizontal Type
C	Case Type

❺Features

Code	Features
S	Safety Recognized
N	General Use

❻Inductance

Expressed by three figures. The unit is micro-henry (μH). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures. If there is a decimal point, it is expressed by capital letter "**R**". In this case, all figures are significant digits. If inductance is less than 0.1 μH, the inductance code is expressed by combination of two figures and capital letter "**N**", and the unit of inductance is nano-henry (nH). Capital letter "**N**" indicates the unit of "nH", and also expresses a decimal point. In this case, all figure are significant digits.

❼Rated Current

Expressed by three figures. The unit is in ampere (A). A decimal point is expressed capital letter "**R**". In this case, all figures are significant digits.

❽Winding Mode

Code	Winding Mode
D	Sectional Winding Type
R	Standard Type
P	Aligned Winding Type
T	Troidal Type

❾Lead Dimensions

Code	Lead Dimensions
2	3.5mm
1	5mm
0	4mm (PLT)
3	4mm (Except for PLT)

❿Packaging

Code	Packaging	Series
B	Bulk	All series
M	Magazine Package	**PLT** All series

•Please contact us for FKOB type.

Chip Varistors

(Global Part Number) **VC M 18 R N 180 D S 1 L**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶Product ID

Product ID	
VC	Chip Varistor

❷Structure

Code	Structure
M	Monolithic Type

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
18	1.60×0.80mm	0603
21	2.00×1.25mm	0805

❹Style

Code	Style
R	Standard Type

❺Category

Code	Category
N	Standard Type

❻Rated Voltage

Expressed by three figures. The unit is in volts (V). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures. If there is a decimal point, it is expressed by capital letter "**R**". In this case, all figures are significant digits.

❼Electrode

Expressed by a figure.

Ex.)

Code	Electrode
D	Ag/Pd
S	Sn

❽Characteristics

Code	Characteristics
S	Standard Type

❾Number of Circuit

Code	Number of Circuit
1	1 Circuit

❿Packaging

Code	Packaging
L	Plastic Taping (ø180mm Reel)
B	Bulk

Chip EMIGUARD® (EMIFIL® with Varistor Function)

(Global Part Number) **VF M 41 R N 222 N 1C L**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
VF	Chip Solid EMIGUARD®

❷Structure

Code	Structure
M	Monolithic Type

❸Dimension (L×W)

Code	Dimension (L×W)
41	4.50×1.60mm

❹Outer Electrode

Code	Outer Electrode
R	Standard Type

❺Category

Code	Category
N	Standard

❻Capacitance

Expressed by three figures. The unit is in pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures.

❼Capacitance Tolerance

Code	Capacitance Tolerance
N	±30%

❽Rated Voltage

Code	Rated Voltage
1C	16V

❾Packaging

Code	Packaging
L	Plastic Taping (ø180mm Reel)
B	Bulk

Lead Type EMIGUARD® (EMIFIL® with Varistor Function)

(Global Part Number) **VF** **S** **6** **V** **D8** **1E** **221** **T51** **B**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
VF	EMIGUARD® Lead Type

❷Structure

Code	Structure
S	Built-in Ferrite Beads Type
R	with Resistance

❸Style

Code	Style
3	Size is expressed by a figure
6	
9	

❹Features

Code	Features
V	with Varistor Function

❺Temperature Characteristics

Code	Temperature Characteristics
D8	+20/-30% (Temperature Range : -40˚C～+105˚C)
D3	+20/-30% (Temperature Range : -25˚C～+85˚C)

❻Rated Voltage

Code	Rated Voltage
1E	25V
1B	12V

❼Capacitance

Expressed by three figures. The unit is in pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zero which follow the two figures.

❽Lead Type

Code	Lead Type
Q□□	Straight Type
T□□, U□□	Others

❾Packaging

Code	Packaging	Series
A	Ammo Pack	**VFR3V/VFS6V**
B	Bulk	**VFR3V/VFS6V/VFS9V**
J	Corrugated Reel ø320mm	**VFS9V**

RC/C Module

(Global Part Number)

RC Module

❶	❷	❸	❹	❺	❻	❼	❽
AR	**CL**	**8**	**L**	**S**	**103**	**102**	

C Module

❶	❷	❸	❹	❺	❼	❽
CN	**TL**	**8**	**X**	**W**	**102M**	

❶Product ID

Product ID	
AR	RC Module
CN	C Module

❷Series

Code	Series
C	Standard (H : 7.6mm max.)
CL	Low-profile Standard (H : 5.5mm max.)
TL	Low-profile Standard (H : 5.5mm max.)

❸Number of Lead Terminal

Expressed by one or two figures.

❹Circuit Type

Expressed by an alphabet.

❺Lead Pitch

Code	Lead Pitch	
None	**AR** Series	Inch Pitch
W	**CNTL** Series	Inch Pitch
S	Shrink Pitch	

❻Resistance and Tolerance (RC Module)

Expressed by three figures.

Ex.)

Code	Resistance and Tolerance
103	10000Ω±5%

Please contact us for any other tolerance.

❼Capacitance and Tolerance

RC Module : Expressed by three figures.
C Module : Expressed by three figures and an alphabet.

Ex.)

Code	Capacitance and Tolerance	
102	RC Module	1000pF
102M	C Module	1000pF, M : ±20%

As for the tolerance of RC Modules.

❽Other Specifications

Ferrite Cores

(Global Part Number) **FS** **RB** **12** **1** **060** **RT** **B0** **0** **T**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
FS	Ferrite

❷Series

Code	Series
RH	Beads Core
RB	Ring Core
RC	for Flat Cable
MA	Mutli-hole Core
SA	Plate Core

❸Dimensions

Code	Dimensions
12	Approximately 12mm
05	Approximately 5mm

❹Outer Dimension Suppliment Code

Code	Outer Dimension Suppliment Code
0	Serial number is added in case their internal diameters are the same.

❺Length

Code	Length
120	12.0mm
050	5.0mm
A50	1.50mm
B50	2.50mm
Z50	0.50mm
Z55	0.55mm

Expressed by three figures or combination of an alphabet and two figures. A to J (except I) indicates one to nine. Z indicates Zero.

❻Material

Code	Material
RN	Ni-Zn μ=550
RT	Ni-Zn μ=1600
RX	Ni-Zn μ=750

❼Process

Code	Process
00	Standard Type
B0	Barrel Type
F0	Separate Type

❽Individual Specification Code

Code	Individual Specification Code
0	Standard Type

❾Packaging

Code	Packaging
B	Bulk
T	Tray

Part Numbering

CERALOCK® (MHz)

(Global Part Number) **CS** **T** **CV** **16M0** **X53** ******* **-R0**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
CS	Ceramic Resontors

❷Frequency/Capacitance

Code	Frequency/Capacitance
A	MHz No capacitance built-in
T	MHz Built-in Capacitance

❸Structure/Size

Code	Structure/Size
LA	Lead Type
LS	Round Lead Type
CC	Cap Chip Type
CR/CE/CG	Small-cap Chip Type
CV	Monolithic Chip Type
CW	Small Monolithic Chip Type

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz). Decimal point is expressed by capital letter "**M**".

❺Design

Code	Design
G□□	Thickness Shear mode
T/V□□	Thickness Expander mode
X□□	Thickness Expander mode (3rd overtone)

□□ indicates initial frequency tolerance and load capacity.

❻Individual Specification

Code	Individual Specification
*******	Three-digit alphanumerics express "Individual Specification".

With standard products, "❻Individual Specification" is omitted, and "❼Package Specification Code" is carried up.

❼Packaging

Code	Packaging
-B0	Bulk
-A0	Radial Taping H_0=18mm
-A1	Radial Taping H_0=16mm
-R0	Plastic Taping ø=180mm
-R1	Plastic Taping ø=330mm

Radial taping is applied to lead type and plastic taping to chip type.

CERALOCK® (kHz)

(Global Part Number) **CS** **B** **FB** **1M00** **J58** ******* **-R1**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
CS	Ceramic Resontors

❷Frequency/Capacitance

Code	Frequency/Capacitance
B	kHz No capacitance built-in

❸Structure/Size

Code	Structure/Size
LA	Two-Terminal Lead Type
FB	SMD Type

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz). Capital letter "**K**" following three figures expresses the unit of "kHz".

❺Design

Code	Design
E□□	Area Expansion mode
J□□	Area Expansion mode (Closed Type)

□□ indicates initial frequency tolerance and load capacitance.

❻Individual Specification

Code	Individual Specification
*******	Three-digit alphanumerics express "Individual Specification".

With standard products, "❻Individual Specification" is omitted, and "❼Package Specification Code" is carried up.

❼Packaging

Code	Packaging
-B0	Bulk
-R1	Plastic Taping ø=330mm

SAW Resonators

(Global Part Number) **SA** ❶ **R** ❷ **UK** ❸ **433M92** ❹ **B** ❺ **X** ❻ **M** ❼ **0** ❽ **R11** ❾

❶Product ID

Product ID	
SA	SAW

❷Function

Code	Function
R	Resonator

❸Structure/Size

Code	Structure/Size
UK	Package

❹Resonant Frequency

Expressed by six-digit alphanumerics. The unit is in hertz (Hz). A decimal point is expressed by the capital letter "**M**".

❺Design

Code	Design
B	1 port

❻Board

Code	Board
X	Crystal

❼Resonant Frequency Tolerance

Code	Resonant Frequency Tolerance
L	±50kHz
M	±75kHz
P	±100kHz

❽Customer Code

Expressed by a figure.

❾Packaging

Code	Packaging
R11	1000pcs. /ø178mm Reel
R04	4000pcs. /ø330mm Reel

BGS Resonators

(Global Part Number) **MK** ❶ **R** ❷ **KA** ❸ **81M0** ❹ **AB0** ❺ **P** ❻ **00** ❼ **R11** ❽

❶Product ID

Product ID	
MK	BGS

❷Function

Code	Function
R	Resonator

❸Structure/Size

Code	Structure/Size
KA	Chip Type
GA	Lead Type

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz). A decimal point is expressed by the capital letter "**M**".

❺Standard Specification Code

Code	Standard Specification Code
AB0	Three-digit alphanumerics express product specifications.

❻Piezoelectric Board

Code	Piezoelectric Board
P	An alphabet expresses a piezoelectric substrate material.

❼Individual Specification Code

Code	Individual Specification Code
00	Standard Type

❽Packaging

Code	Packaging
R11	Plastic Taping ø=180mm
B05	Bulk

Plastic taping is only for chip type.

Part Numbering

Piezoelectric Speakers (CERAMITONE®)

(Global Part Number) VS | B | 35 | E | W | -07 | 01 | B

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
VS	Piezoelectric Speakers

❷Product

Code	Product
B	Piezoelectric Diaphragms

❸Outer Dimensions

Code	Outer Dimensions
35	ø35mm
50	ø50mm

❹Drive

Code	Drive
E	External Drive

❺Outer Electrode Style

Code	Outer Electrode Style
W	Lead Wire Type

❻Resonant Frequency Type

Code	Resonant Frequency
-03	1st Resonant Freqeuncy : 300Hz
-07	1st Resonant Freqeuncy : 700Hz

❼Individual Specification Code

Code	Individual Specification Code
01	Characteristics, Style, others

❽Numbers of Ceramic

Code	Numbers of Ceramic
B	Two Elements (The code is omitted when element is one.)

Piezoelectric Diaphragms

(Global Part Number) 7 | N | B | -31R2 | DM | -1R5 | | A | 10

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID(1)

Product ID(1)	Ceramic Material
7	A2

❷Product(2)

Product ID(2)	Metal Plate Material
B	Brass
N	Nickel Alloy
M	Ni Plated Iron
S	SUS

❸Product

Code	Product
B	Piezoelectric Diaphragms

❹Metal Plate Diameter

Code	Metal Plate Diameter
-31R2	A hyphen (-) plus four-digit alphanumerics express metal plate outer dimensions. A decimal point is expressed by the capital letter "**R**".

If there is no decimal point, the decimal point code is omitted.

❺Form of Piezoelectric Style

Code	Form of Piezoelectric Style
DM	Two digits express shape of ceramics.

For an Ag electrode, this digit remains blank, the corresponding code is omitted.

❻Resonant Frequency Type

Code	Resonant Frequency (kHz)
-1R5	A hyphen (-) and three-digit alphanumerics express resonant frequency. A decimal point is expressed by the capital letter "**R**".

If there is no decimal point, the decimal point is omitted.

❼With Feedback Electrode

Code	With Feedback Electrode
C	With Feedback Electrode
—	without Feedback Electrode

❽Product Specification

Code	Product Specification
A	With lead
—	No lead (omitted)

❾Individual Specification Code

Code	Individual Specification Code
10	These digits express a lead length, lead number, and presence/absence of a connector.

If the product has no individual specification, the corresponding code is omitted.

Piezoelectric Sounders/Piezoelectric Buzzers/Piezoelectric Ringers(PIEZORINGER®)

(Global Part Number) **PK M 13 E P Y -40 00 P -A0**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶Product ID

Product ID	
PK	Piezoelectric Sound Components

❷Product

Code	Product
M	Sounder, Ringer
B	Buzzer

❸Outer Dimensions

Expressed by two figures in mm.

Ex.)

Code	Outer Dimensions
13	ø12.6mm

❹Drive

Code	Drive
E	External-Drive
S	Self-Drive

❺Outer Electrode Style

Code	Outer Electrode Style
P	Pin Type
W	Lead Wire Type

❻Structure

Code	Structure
T	Standing Type
P	Flat Type Auto-assemble
Y	Flat Type/Available for Taping
C	Flat Type/Semi-auto-assemble

❼Oscillating Frequency Type

Code	Oscillating Frequency Type
-40	A hyphen (-) plus two-digit figures express Oscillating Frequency type.

If there is no decimal point, the decimal point is omitted.

❽Individual Specification Code

Code	Individual Specification Code
00	Two digits express specific specification in characteristics.

❾Special Quality Guarantee

Code	Special Quality Guarantee
P	Post Plated Terminal
—	Omitted

❿Packaging

Code	Packaging
-B0	Bulk
-A0	Radial Taping
-M0	Magazine

Radial taping or magazine are not available for all types.
Please contact us.

SMD Piezoelectric Sounder

(Global Part Number) **PK LCS 1212 E 40 01 -R1**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
PK	Piezoelectric Sound Components

❷Product

Code	Product
LCS	SMD Sounder

❸Dimensions

Code	Outer Dimensions
1212	□12mm

❹Drive

Code	
E	External Drive

❺Oscillating Frequency Type

Code	
40	A hyphen (-) plus two-digit figures express Oscillating Frequency type.

❻Individual Specification Code

Code	Individual Specification Code
01	Two digit express specific specification in characteristics.

❼Packaging

Code	Packaging
-B0	Bulk
-R1	Plastic taping

SMD Piezoelectric Receiver

(Global Part Number) **PK** **LCD** **1212** **E** **10** **00** **-R1**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
PK	Piezoelectric Sound Components

❷Product

Code	Product
LCD	SMD Receiver

❸Dimensions

Code	Outer Dimensions
1212	□12mm

❹Drive

Code	
R	Receiver

❺Oscillating Frequency Type

Code	
10	A hyphen (-) plus two-digit figures express Oscillating Frequency type.

❻Individual Specification Code

Code	Individual Specification Code
00	Two digit express specific specification in characteristics.

❼Packaging

Code	Packaging
-B0	Bulk
-R1	Plastic taping

● Part Numbering

Antenna/Duplexer Dielectric Filters (GIGAFIL®)
for RF/Local Dielectric Filters (GIGAFIL®)

(Global Part Number) **DF** ❶ **YK6** ❷ **1G95** ❸ **LBNBB-** ❹ **TT1** ❺

❶Product ID

Product ID	
DF	Microwave Filters (GIGAFIL®)

❷Series

Two capital letters and an alphabet express the series name.

❸Nominal Center Frequency

Expressed by four-digit alphanumerics. If the unit is "MHz", it is expressed by three figures plus "**M**". If the unit is "GHz", a decimal point is expressed by capital letter "**G**".

❹Individual Specification Code

Expressed by five alphabets plus a hyphen.

❺Packaging

Code	Packaging
T**	Tray
R**	Reel

Packaging varies on each product type. Please contact us for details.

Chip Multilayer LC Filters for RF/Local and IF

(Global Part Number) **LF** ❶ **B** ❷ **32** ❸ **836M** ❹ **SA** ❺ **1** ❻ **-747** ❼

❶Product ID

Product ID	
LF	Chip Multilayer LC Filters

❷Function

Code	Function
B	Band-pass Filters
L	Low-pass Filters
D	Multi-function Filters
E	Trap

❸Dimensions (L×W)

Code	Dimensions (L×W)
18	1.60×0.80mm
21	2.00×1.25mm
31	3.20×1.60mm
32	3.20×2.50mm
43	4.50×3.20mm
55	5.70×5.00mm

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. If the unit is "MHz", it is expressed by three figures plus "**M**". If the unit is "GHz", a decimal point is expressed by capital letter "**G**".

❺Series

Code	Series
SA	Two capital letters express the series name.

❻Design

Code	Design
1	A figure expresses identification of the series design type.

❼Individual Specification Code

Code	Individual Specification Code
-747	Specification, Characteristics, others

SAW Filters for RF/Local and IF

(Global Part Number) **SA** | **F** | **CC** | **942M** | **VM0** | **T** | **00** | **R05**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
SA	SAW

❷Function

Code	Function
F	Single Filter
W	Dual Filter

❸Structure/Size

Code	Structure/Size
CC	Package Type

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is hertz (Hz). If the unit is "MHz", it is expressed by three figures plus "**M**". If the unit is "GHz", a decimal point is expressed by capital letter "**G**".

❺Character Design

Code	Character Design
VM0	A serial number expresses the design version.

❻Board

Code	Board
T	Expresses the substrate being used.

❼Individual Specification

Code	Individual Specification
00	—

❽Packaging

Code	Packaging
R00	10000 pcs./ø330mm Reel
R05	5000 pcs./ø330mm Reel
R11	1000 pcs./ø180mm Reel

Ceramic Filters (CERAFIL®) for IF

(Global Part Number) **CF** | **X** | **CA** | **450K** | **CFA** | **001** | **-R0**
SF | **P** | **CA** | **455K** | **D4A** | | **-R0**
SF | **E** | **CS** | **10M8** | **PF00** | **00** | **-R0**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

❷Oscillating/Element

Product ID		Oscillating/Element	
CF	CERAFIL® for Communication Equipment	**U**	4 Elements Area Expansion mode
		W	6 Elements Area Expansion mode
		X	4 Elements Length mode
SF		**P**	4 Elements Area Expansion mode
		E	2 Elements Thickness Expansion mode
		S	2 Elements Thickness Shear mode
		J	4 Elements Thickness Shear mode

❸Structure/Size

Code	Structure/Size
C□	Chip Type
L□	Lead Type

□ is "**A**" or subsequent code, which indicates the size. It varies depending on vibration mode and number of elements.

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is hertz (Hz). If the unit is "kHz", it is expressed by three figures plus "**K**". If the unit is "MHz", a decimal point is expressed by the capital letter "**M**".

❺Product Specification

Code	Product Specification
CFA	Three alphabets express pass band width, center frequency tolerance and design type.

❻Individual Specification

Code	Individual Specification Code
001	Expressed by three-digit alphanumerics.

❼Packaging

Code	Packaging
-B0	Bulk
-R0	Plastic Taping ø=180mm
-R1	Plastic Taping ø=330mm
-M0	Magazine

Magazine casette is applied to lead type and plastic taping to chip type.

BGS Filter for IF

(Global Part Number) **MK** **F** **KB** **51M7** **JA0** **P** **00** **R11**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
MK	BGS

❷Function

Code	Function
F	Filter

❸Structure/Size

Code	Structure/Size
KB	Chip Type

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is hertz (Hz). If the unit is "MHz", it is expressed by three figures plus "**M**".

❺Product Specification

Code	Product Specification
JA0	Expressed by three figures.

❻Piezoelectric Board Material

Code	Piezoelectric Board Material
P	Expressed by an alphabet.

❼Individual Specification Code

Code	Individual Specification Code
00	Standard

❽Packaging

Code	Packaging
R11	Plastic Taping ø=180mm

Ceramic Discriminators for IF

(Global Part Number) **CD** **B** **LB** **450K** **C** **A** **X** **16** **-B0**

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
CD	Ceramic Discriminators

❷Oscillating

Code	Oscillating
B	Area Expansion mode

❸Structure/Size

Code	Structure/Size
C☐	Chip Type
L☐	Lead Type

☐ is "**A**" or subsequent code, which indicates the size. It varies depending on vibration mode and number of elements.

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz). Capital letter "**K**" following three figures expresses the unit of "kHz".

❺Detection

Code	Detection
C	Quadrature Detection

❻Application

Code	Application
A	Standard
L	Application with coil

❼Element Type

Code	Element Type
X	Low-capacitance
Y	High-capacitance

❽IC

Code	IC
16	Applicable IC Control code

❾Packaging

Code	Packaging
-B0	Bulk
-R0	Plastic Taping ø=180mm
-R1	Plastic Taping ø=330mm
-M0	Magazine

Magazine casette is applied to lead type and plastic taping to chip type. With non-standard products, one alphabet indicating "Individual Specification" is added between "❽Applicable IC" and "❾Package Specification code".

● Part Numbering

Isolators

(Global Part Number) **CE** ❶ | **040** ❷ | **1G95** ❸ | **DCB000** ❹ | **RAB** ❺

❶Product ID

Product ID	
CE	Isolators

❷Series

Code	Series
053	5×5×2mm
073	7×7×2mm
040	4×4×2mm
041	4×4×1.7mm

❸Nominal Center Frequency

Expressed by four-digits alphanumerics. If the unit is "MHz", it is expressed by three figures plus "**M**". If the unit is "GHz", a decimal point is expressed by capital letter "**G**".

❹Individual Specification Code

Expressed by three alphabets and three digits serial number.

❺Packaging

Code	Packaging
TT1	Bulk
RCA	250 pcs. /Reel (**CE053**, **CE073**)
RD1	1000 pcs. /Reel (**CE053**, **CE073**)
RAB	500 pcs. /Reel (**CE040, CE041**)
RB2	2000 pcs. /Reel (**CE040, CE041**)

Chip Multilayer Hybrid Couplers/Chip Multilayer Hybrid Dividers

(Global Part Number) **LD** ❶ | **C** ❷ | **21** ❸ | **897M** ❹ | **20** ❺ | **B** ❻ | **-027** ❼

❶Product ID

Product ID	
LD	Chip Multilayer Devices

❷Function

Code	Function
C	Couplers
D	Dividers

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
18	1.60×0.80mm	0603
21	2.00×1.25mm	0805
31	3.20×1.60mm	1206
32	3.20×2.50mm	1210
43	4.50×3.20mm	1812
55	5.70×5.00mm	2220

❹Nominal Center Frequency

Expressed by four figures. If the unit is "MHz", it is expressed by three figures plus "**M**". If the unit is "GHz", a decimal point is expressed by capital letter "**G**".

❺Coupling

Expressed by two figures.

Ex.)

Code	Coupling
03	3dB
14	14dB
20	20dB

❻Design

Code	Design
B	Couplers Single Type
H	with Integrated LPF
L	with Integrated LPF
A	Dividers Standard Type

❼Individual Specification Code

Code	Individual Specification Code
-027	Spcification, Characteristics, others

Chip Multilayer Hybrid Baluns

(Global Part Number) **LD** **B** **21** **836M** **20** **C** **-001**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
LD	Chip Multilayer Devices

❷Function

Code	Function
B	Baluns

❸Dimension (L×W)

Code	Dimension (L×W)	EIA
21	2.00×1.25mm	0805
31	3.20×1.60mm	1206

❹Nominal Center Frequency

Expressed by four figures. If the unit is "MHz", it is expressed by three figures plus "**M**". If the unit is "GHz", a decimal point is expressed by capital letter "**G**".

❺Balanceport Impedance

Code	Balanceport Impedance
05	50Ω
10	100Ω
20	200Ω

❻Design

Code	Design
C	Standard

❼Individual Specification Code

Code	Individual Specification Code
-001	Spcification, Characteristics, others

Chip Dielectric Antennas

(Global Part Number) **AN** **C** **G1** **1G48** **SAA003** **R** **F** **1**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
AN	Dielectric Antennas

❷Function

Code	Function
C	Chip Dielectric Antennas

❸Series

Expressed by an alphabet and a figure.

❹Nominal Center Frequency

Expressed by four figures. If the unit is "MHz", it is expressed by three figures plus "**M**". If the unit is "GHz", a decimal point is expressed by capital letter "**G**".

❺Individual Specification Code

Expressed by three alphabets and a three-digit serial number.

❻Package Product ID
❼Package Detail(1)
❽Package Detail(2)

Code	Package Product ID	Code	Package Detail(1)	Code	Package Detail(2)
R	Reel	**F**	Tape Width 24mm ø330mm	**1**	Package Quantity per Reel (Ex: 1=1000pcs/reel)
		D	Tape Width 16mm ø330mm		
T	Tray	**T**	Tray Specification	**1**	Tray Specification

Dielectric Resonators (RESOMICS®) TE Mode

(Global Part Number)

DR	D	055	0244	M	20	B	00	R
❶	❷	❸	❹	❺	❻	❼	❽	❾

❶Product ID

Product ID	
DR	Dielectric Resonators(RESOMICS®)

❷Product

Code	Product
D	TE Mode (Disc Type)
T	TE Mode (Tube Type)

❸Outer Diameter

Code	Outer Diameter
055	Expressed by three figures. The unit is 1/10mm.

❹Thickness

Code	Thickness
0244	Expressed by four figures. The unit is 1/100mm.

❺Materials

Code	Materials
U	U Series
M	M Series
V	V Series
R	R Series
B	B Series
E	E Series
F	F Series

❻Resonant Frequency Temperature Characteristics(Tf)

Expressed by two figures or combination of an alphabet and a figure.

Ex.)

Code	Resonant Frequency Temperature Characteristics(Tf) Tolerance
C0	−2.0 ppm/˚C
20	2.0 ppm/˚C

❼Resonant Frequency Temperature Characteristics(Tf) Tolerance

Code	Resonant Frequency Temperature Characteristics(Tf) Tolerance
Z	±2 ppm/˚C
A	±1 ppm/˚C
B	±0.5ppm/˚C

❽Individual Specification Code (Serial)

Code	Individual Specification Code (Serial)
00	Standard Type

❾Packaging

Code	Packaging
T	Bulk
R	Taping

Dielectric Resonators (RESOMICS®) TEM Mode

(Global Part Number) **DR** **R** **020** **1G590** **K** **T** **C** **00** **R**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶Product ID

Product ID	
DR	Dielectric Resonators(RESOMICS®)

❷Product

Code	Product
R	TEM Mode

❸Outer Diameter

Code	Outer Diameter
020	2.0×2.0mm
030	3.0×3.0mm
040	4.0×4.0mm
060	6.0×6.0mm

❹Nominal Center Frequency

Expressed by five figures. If the unit is "MHz", it is expressed by three figures plus "**M**". If the unit is "GHz", a decimal point is expressed by capital letter "**G**".

Ex.)

Code	Nominal Center Frequency
900M0	900MHz
1G200	1200MHz

❺Materials

Code	Materials
U	U Series
K	K Series
P	P Series

❻Wave Length

Code	Wave Length
T	λ /4
P	λ /2

❼Electrode

Code	Electrode
C	Copper
S	Silver

❽Individual Specification Code (Serial)

Code	Individual Specification Code (Serial)
00	Standard

❾Packaging

Code	Packaging
T	Bulk
R	Taping

High-Frequency Microchip Capacitors

(Global Part Number) **CL** ❶ **B** ❷ **05** ❸ **B5** ❹ **390** ❺ **K** ❻ **1** ❼ **000** ❽ **TC1** ❾

❶Product ID

Product ID	
CL	High-Frequency Microchip Capacitors

❷Series

Code	Series
B	with Border on Both Sides

❸Size

Code	Size
0A	0.25×0.25mm
0B	0.30×0.25mm
0C	0.35×0.25mm
0D	0.38×0.38mm
0E	0.55×0.38mm
0H	0.71×0.38mm
05	0.50×0.50mm
0G	0.70×0.50mm
0K	0.90×0.50mm
0F	0.64×0.64mm
1A	1.00×0.64mm
0J	0.76×0.76mm
1B	1.09×0.76mm
09	0.90×0.90mm
1E	1.49×0.90mm
1C	1.27×1.27mm
1G	1.73×1.27mm
2C	2.19×1.27mm
1H	1.78×1.78mm
2L	2.95×1.78mm
2E	2.29×2.29mm
3G	3.71×2.29mm

❹Temperature Characteristics

Code	Temperature Range	Capacitance Change
5C	-25 to 85˚C	0±30ppm/˚C
6U	-25 to 85˚C	-750±60ppm/˚C
7K	-25 to 85˚C	-2200±500ppm/˚C
B5	-25 to 85˚C	±10%
F9	-25 to 85˚C	+30,-80%
W1	-25 to 85˚C	+30,-90%

❺Capacitance

Expressed by three figures. The unit is pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

❻Capacitance Tolerance

Code	Capacitance Tolerance
B	±0.1pF
K	±10%
M	±20%
Z	+80%, -20%

❼Numbers of Electrode

Code	Number of Electrode
1	1
3	3
4	4
5	5

❽Individual Specification Code

Code	Individual Specification Code
000	Standard

❾Packaging

Code	Packaging
TC1	Tray

Coaxial Connectors (Chip Type Receptacle)

(Global Part Number) **MM** **7329** **-27** **00** **R** **A1**
❶ ❷ ❸ ❹ ❺ ❻

❶Product ID

Product ID	
MM	Microwave Coaxial Connectors (Chip Type Receptacle)

❷Series

Code	Series
3325	BFA Type Straight
3326	BFA Type Right Angle
7329	FSC Type
8430	SWD Type
9329	GSC Type

❸Individual Specification Code(1)

Code	Individual Specification Code(1)
-25	Discrete Terminal
-26	Switch Connector SMD Type
-27	Connector SMD Type

❹Individual Specification Code(2)

Code	Individual Specification Code(2)
00	Serial

❺Package Product ID

Code	Package Product ID
B	Bulk
R	Reel

❻Package Detail

Code	Package Detail
A1	FSC,SWD,GSC Type 1000pcs. /Reel (ø178mm)
B3	SWD Type, 3000pcs. /Reel (ø330mm)
B4	FSC Type, 4000pcs. /Reel (ø330mm)
B5	GSC Type, 5000pcs. /Reel (ø330mm)

Coaxial Connectors (with Cable)

(Global Part Number) **MX** **FG** **76** ☐ ☐ ☐
❶ ❷ ❸ ❹ ❺ ❻

❶Product ID

Product ID	
MX	Coaxial Connectors (with Cable)

❷Connector (1)

Code	Connector (1)
FG	FSC Type for 76 Cable
FK	FSC Type for 81 Cable
TK	GSC Type
YH	BFA Type

❸Cable

Code	Cable
62	0.8D,PE, Double Shield Line
63	0.8D,PE, Single Shield Line
75	0.8D,FEP, Double Shield Line
76	0.8D,FEP, Single Shield Line
81	0.4D,FEP, Single Shield Line
88	0.4D,PFA, Single Shield Line, Single Line
92	0.4D,PFA, Single Shield Line, Spiral

❹Connector (2)

Code	Connector (2)
FG	FSC Type for 76 Cable
FK	FSC Type for 81 Cable
TK	GSC Type
YH	BFA Type
XX	None Connector

❺Length

Expressed by four figures.

❻Individual Specification Code

Expressed by two figures.

Part Numbering

RF Diode Switches

(Global Part Number) **LM** ❶ **SW** ❷ **43** ❸ **KA** ❹ **-207** ❺

❶Product ID

Product ID	
LM	Multilayer Modules

❷Function

Code	Function
SW	RF Diode Switches
SP	Switchplexer®

❸Dimension (L×W)

Code	Dimension (L×W)
43	4.50×3.20mm
65	6.30×5.00mm

❹Design

Two capital letters express identification of design type for each function.

❺Individual Specification Code

Specificaions, Characteristics, others

VCO

(Global Part Number) **MQ** ❶ **W** ❷ **11** ❸ **2B** ❹ **897M** ❺ **R** ❻ **5** ❼

❶Product ID

Product ID	
MQ	VCO

❷Series

Code	Series
W	Dual VCO
E	7.6×5.8mm min.
K	5.5×4.8mm min.
L	5.0×4.0mm min.

❸Dimension/Application

Code	Dimension/Application
11	Pin Layout, Type

❹Serial Number

Expressed by an alphabet and a figure.

❺Nominal Center Frequency

Expressed by four figures. If the unit is "MHz", it is expressed by three figures plus "**M**". If the unit is "GHz", a decimal point is expressed by capital letter "**G**".

❻Package Product ID

Code	Package Product ID
R	Taping

❼Package Detail

Code	Package Detail
5	Quantity, direction of reel

PLL Modules

(Global Part Number) **HF** ❶ **Q** ❷ **D31P15A** ❸ **01** ❹ **A** ❺ **R** ❻ **5** ❼

❶Product ID

Product ID	
HF	Module Products

❷Series

Code	Series
Q	PLL Modules

❸Dimension/Application

Code	Dimension/Application
D31P15A	Size, System

❹Serial Number

Expressed by two figures.

❺Others

Code	Others
A	Specification Change Code

❻Package Product ID

Code	Package Product ID
R	Taping

❼Package Detail

Code	Package Detail
5	Quantity, direction of reel

● Part Numbering

CERAFIL® for AM

(Global Part Number) **PF** **W** **LA** **450K** **P2A** **-B0**
❶ ❷ ❸ ❹ ❺ ❻

❶Product ID

Product ID	
PF	Ceramic Filters
SF	Ceramic Filters
CF	Ceramic Filters

❷Oscillation/Numbers of Element

Code	Oscillation/Numbers of Element
S	1 Element Length mode
W	2 Elements Length mode
U	1 Element Area Expansion mode
Z	2 Elements Area Expansion mode
P	4 Elements Area Expansion mode

❸Structure/Size

Code	Structure/Size
L□	Lead Type
C□	Chip Type

□ is "**A**" or subsequent code, which indicates the size. It varies depending on vibration mode and number of elements.

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz). Capital letter "**K**"following three figures expresses the unit of "kHz".

❺Product Specification

Code	Product Specification
P2A	Standard Type

□□**A** indicates standard type.

❻Packaging

Code	Packaging
-B0	Bulk
-R0	Plastic Taping (ø180mm)
-R1	Plastic Taping (ø330mm)
-A0	Radial Taping H_0=18mm
-M0	Magazine Cassette

Radial taping is applied to lead type and plastic taping to chip type. With non-standard products, three-digit alphanumerics indicating "Individual Specification" is added between "❺Product Specification" and "❻Packaging".

CERAFIL® for Search-stop Signal Detection

(Global Part Number) **BF** **U** **LA** **450K** **C** **-B0**
❶ ❷ ❸ ❹ ❺ ❻

❶Product ID

Product ID	
BF	Resonator

❷Oscillation/Numbers of Element

Code	Oscillation/Numbers of Element
U	1 Element Area Expansion mode

❸Structure/Size

Code	Structure/Size
LA	Lead Type Standard

❹Nominal Center Frequency

Code	Nominal Center Frequency
450K	450kHz

❺Product Specification

Code	Product Specification
C□	Bandwidth

With standard type, □ is omitted.

❻Packaging

Code	Packaging
-B0	Bulk

Radial taping is applied to lead type and plastic taping to chip type. With non-standard products, "Individual Specification (serial number)" and "Lead Shape (Lead Bend : **B**)" are added between "❺Product Specification" and "❻Package Specification Code" upon specification.

CERAFIL® for FM

(Global Part Number) **SF** ❶ **E** ❷ **LA** ❸ **10M7** ❹ **FAA0** ❺ **-R0** ❻

❶Product ID

Product ID	
SF	Ceramic Filters

❷Oscillation/Numbers of Element

Code	Oscillation/Numbers of Element
E	2 Elements Thickness Expander mode
T	3 Elements Thickness Expander mode
K	2 Elements Thickness Expander mode (2nd Harmonic)
V	2 Elements Thickness Expander mode (3rd Over Tone)

❸Structure/Size

Code	Structure/Size
L□	Lead Type
C□	Chip Type

□ is expressed "**A**" or subsequent code, which indicates the size.

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz).
Decimal point is expressed by capital letter "**M**".

❺Product Specification

Code	Product Specification
FAA0	Four-digit alphanumerics express pass-bandwidth, center frequency tolerance, rank, series, others.

❻Packaging

Code	Packaging
-B0	Bulk
-R0	Plastic Taping ø180mm
-R1	Plastic Taping ø330mm
-A0	1500pcs. /Radial Taping H_0=18mm
-A1	1000pcs. /Radial Taping H_0=18mm

Radial taping is applied to lead type and plastic taping to chip type.
With non-standard products, two-digit alphanumerics indicating "Individual Specification" is added between "❺Product Specification" and "❻Packaging".

Discriminators for FM

(Global Part Number) **CD** ❶ **A** ❷ **LA** ❸ **10M7** ❹ **GA** ❺ **001** ❻ **-R0** ❼

❶Product ID

Product ID	
CD	Discriminators

❷Oscillation

Code	Oscillation
A	Thickness Expander mode

❸Structure/Size

Code	Structure/Size
L□	Lead Type
C□	Chip Type

□ is expressed "**A**" or subsequent code, which indicates the size.

❹Nominal Center Frequency

Expressed by four-digit alphanumerics . The unit is in hertz (MHz).
Decimal point is expressed by capital letter "**M**".

❺Product Specification

Code	Product Specification
GA	Two-digit alphanumerics express type, center frequency, rank, others

❻IC

Code	IC
001	Applicable IC Control Code

❼Packaging

Code	Packaging
-B0	Bulk
-A0	Radial Taping H_0=18mm
-R0	Plastic Taping (ø180mm)
-R1	Plastic Taping (ø330mm)

Radial taping is applied to lead type and plastic taping to chip type.
With non-standard products, an alphanumerics indicating "Individual Specification" is added between "❻IC" and "❼Packaging".

CERAFIL® for TV/VCR

(Global Part Number) **SF** **S** **RA** **4M50** **CF** **00** **-B0**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
SF	Ceramic Filters

❷Oscillation/Numbers of Element

Code	Oscillation/Numbers of Element
S	2 Elements Thickness Shear mode
T	3 Elements Thickness Expander mode

❸Structure/Size

Code	Structure/Size
R□	Lead Type
K□	Chip Type

□ is expressed "**A**" or subsequent code, which indicates the size.

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz). Decimal point is expressed by capital letter "**M**".

❺Product Specification Code (1)

Code	Product Specification Code (1)
AF	Standard Bandwidth Type
BF	Tight Bandwidth Type
CF	Standard Bandwidth Type
DF	Broad Bandwidth Type
EF	Ultra-broad Bandwidth Type

The code **AF** is only applied to **SFT** series.

❻Product Specification Code (2)

Code	Product Specification Code (2)
00	Standard Type

❼Packaging

Code	Packaging
-B0	Bulk
-A0	Radial Taping H_0=18mm
-R1	Plastic Taping ø=330mm

Radial taping is applied to lead type and plastic taping to chip type. With non-standard products, two-digit alphanumerics indicating "Individual Specification" is added between "❺Product Specification Code (1)" and "❻Product Specification Code (2)".

Discriminators for TV/VCR

(Global Part Number) **CD** **S** **RH** **4M50** **E** **K** **048** **-A0**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
CD	Discriminators

❷Oscillation

Code	Oscillation
S	Thickness Shear mode

❸Structure/Size

Code	Structure/Size
RH	Standard Type
RL	Low-profile

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz). Decimal point is expressed by capital letter "**M**".

❺Product Specification Code (1)

Code	Product Specification Code (1)
C	Three-terminals
E	Two-terminals

❻Product Specification Code (2)

Code	Product Specification Code (2)
K	Specification

❼IC

Code	IC
048	Applicable IC control code

❽Packaging

Code	Packaging
-B0	Bulk
-A0	Radial Taping H_0=18mm

With non-standard products, an alphabet Indicating "Individual Specification" is added between "❼IC" and "❽Packaging".

Ceramic Traps

(Global Part Number) TP ❶ | S ❷ | RA ❸ | 4M50 ❹ | B ❺ | 00 ❻ | -B0 ❼

❶Product ID

Product ID	
TP	Ceramic Traps

❷Function

Code	Function
S	Single Traps
T	Triple Traps
W	Double Traps

❸Structure/Size

Code	Structure/Size
R☐	Lead Type
K☐	Chip Type

☐ is expressed "**A**" or subsequent code, which indicates the size.

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz). Decimal point is expressed by capital letter "**M**".

❺Product Specification Code (1)

Code	Product Specification (1)
B	Broad-bandwidth Type
C	Low-capacitance Type

❻Product Specification Code (2)

Code	Product Specification Code (2)
00	Standard Type

❼Packaging

Code	Packaging
-B0	Bulk
-A0	Radial Taping H_0=18mm
-R1	Plastic Taping ø=330mm

Radial taping is applied to lead type and plastic taping to chip type. With non-standard products, three-digit alphanumerics indicating "Individual Specification" is added between "❻Product Specification Code (2)" and "❼Packaging".

BGS Traps

(Global Part Number) MK ❶ | T ❷ | GA ❸ | 47M2 ❹ | CAH ❺ | P ❻ | 00 ❼ | B05 ❽

❶Product ID

Product ID	
MK	BGS

❷Function

Code	Function
T	Traps

❸Structure/Size

Code	Structure/Size
GA	Lead Type

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz). Decimal point is expressed by capital letter "**M**".

❺Product Specification (1)

Code	Product Specification (1)
AA	Standard Bandwidth
CA	Narrow-bandwidth

❺Product Specification (2)

Code	Product Specification (2)
H	High-freqency side Traps
L	Low-freqency side Traps

❻Piezoelectric Board Material

Code	Piezoelectric Board Material
P	Expressed by an alphabet.

❼Individual Specification Code

Code	Individual Specification Code
00	Standard

❽Packaging

Code	Packaging
B05	Bulk
A03	Radial Taping H_0=18mm

SAW Filters for TV/VCR/Digital Broadcasting

(Global Part Number) **SA** | **F** | **JA** | **58M7** | **VBP** | **Z** | **00** | **R02**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
SA	SAW Filters

❷Function

Code	Function
F	Filters

❸Structure/Size

Code	Structure/Size
G□	Lead Type
J□	Cap Chip Type
C□	Chip Type

□ is expressed "**A**" or subsequent code, which indicates the size.

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz).
Decimal point is expressed by capital letter "**M**".

❺Standard Specification Code

Code	Standard Specification Code
VBP	Three-digit alphanumerics expressed design type.

❻Piezoelectric Board Material

Code	Piezoelectric Board Material
Z	Expressed by an alphabet.

❼Individual Specification Code

Code	Individual Specification Code
00	Standard

❽Packaging

Code	Packaging
B03	Bulk
R01	1000pcs. /Plastic Taping ø=330mm
R03	3000pcs. /Plastic Taping ø=330mm
R10	500pcs. /Plastic Taping ø=180mm
A01	Radial Taping H_0=18mm

Radial taping is applied to lead type and plastic taping to chip type.

SAW Filters for TV/VCR Dual Type

(Global Part Number) **SA** | **W** | **GS** | **38M0** | **VCA** | **Z** | **00** | **B03**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
SA	SAW Filters

❷Function

Code	Function
W	Dual Filters

❸Structure/Size

Code	Structure/Size
GS	Lead Type
KE	Chip Type

❹Nominal Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz).
Decimal point is expressed by capital letter "**M**".

❺Standard Specification Code

Code	Standard Specification Code
VCA	Three-digit alphanumerics expressed design type.

❻Piezoelectric Board Material

Code	Piezoelectric Board Material
Z	Expressed by an alphabet.

❼Individual Specification Code

Code	Individual Specification Code
00	Standard Type

❽Packaging

Code	Packaging
B03	Bulk
A02	Radial Taping H_0=18mm
R02	Plastic Taping ø=330mm

Radial taping is applied to lead type and plastic taping to chip type.

BGS Filters

(Global Part Number) **MK** **F** **GA** **25M0** **HA0** **P** **00** **B05**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
MK	BGS

❷Function

Code	Function
F	Filters

❸Structure/Size

Code	Structure/Size
G□	Lead Type

□ is expressed "**A**" or subsequent code, which indicates the size.

❹Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz).
Decimal point is expressed by capital letter "**M**".

❺Product Specification

Code	Product Specification
HA0	Expressed by three-digit alphanumerics.

❻Piezoelectric Board Material

Code	Piezoelectric Board Material
P	An alphabet express Piezoelectric material.

❼Individual Specification Code

Code	Individual Specification Code
00	Standard

❽Packaging

Code	Packaging
B05	Bulk
A03	Radial Taping H_0=18mm

● Part Numbering

Focus Adjustment Resistors

(Global Part Number) **MHF** **128** **-24** **A**

❶ ❷ ❸ ❹

❶Product ID

Product ID	
MHF	Focus Adjustment Blocks

❷Style

Code	Style
128	Serial Number

❸Electric Code

Code	Electric Code
-24	Serial Number

❹Individual Specification Code

Code	Individual Specification Code
A	An alphabet is added when other factor is specified.

● Part Numbering

PTC Thermistors (POSISTOR®) Chip Type

(Global Part Number) **PR** | **F** | **18** | **AR** | **471** | **Q** | **B1** | **RB**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
PR	PTC Thermistors Chip Type

❷Series

Code	Series
F	for Overheat Sensing

❸Dimensions (L×W)

Code	Dimensions (L×W)
18	1.60×0.80

❹Temperature Characteristics

Code	Temperature Characteristics
AR	Curie Point 120°C
AS	Curie Point 130°C
BA	Curie Point 110°C
BB	Curie Point 100°C
BC	Curie Point 90°C
BD	Curie Point 80°C
BE	Curie Point 70°C

❺Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
471	470Ω

❻Resistance Tolerance

Code	Resistance Tolerance
Q	Special Tolerance

❼Individual Specifications

Code	Individual Specifications
B1	Structure, others

❽Packaging

Code	Packaging
RB	Paper Taping (4mm Pitch)

PTC Thermistors (POSISTOR®) Lead Type

(Global Part Number) **PT** | **FL** | **04** | **BB** | **222** | **Q** | **2N34** | **B0**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Product ID

Product ID	
PT	PTC Thermistors

❷Series

Code	Series
FL	for Overheat Sensing Lead Type
FM	for Overheat Sensing with Lug-terminal
GL	for Circuit Protection Lead Type

❸Dimensions

Code	Dimensions
04	Nominal Body Dimameter 4mm Series

❹Temperature Characteristics

Code	Temperature Characteristics
BA	Curie Point 110°C
BB	Curie Point 100°C
BC	Curie Point 90°C
BD	Curie Point 80°C
BE	Curie Point 70°C
BF	Curie Point 60°C
BG	Curie Point 50°C
BH	Curie Point 40°C

❺Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
R22	0.22Ω
2R2	2.2Ω
220	22Ω

❻Resistance Tolerance

Code	Resistance Tolerance
Q	Special Tolerance

❼Individual Specifications

Code	Individual Specifications
2N34	Lead Type, others

❽Packaging

Code	Packaging
B0	Bulk

NTC Thermistors Lead Type

(Global Part Number) **NT** **SA0** **XH** **103** **F** **E1** **B0**
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶Product ID

Product ID	
NT	NTC Thermistors

❷Series

Code	Series
SA0	for Temperature Sensors No Lead-coating Type
SD0	for Temperature Sensors Lead-coating Type

❸Temperature Characteristics

Code	Temperature Characteristics
WB	Nominal B-Constant 4050—4099
WC	Nominal B-Constant 4100—4149
WD	Nominal B-Constant 4150—4199
WF	Nominal B-Constant 4250—4299
XM	Nominal B-Constant 3500—3549
XH	Nominal B-Constant 3350—3399
XR	Nominal B-Constant 3700—3749
XV	Nominal B-Constant 3900—3949

❹Resistance

Expressed by three figures. The unit is ohm (Ω). The first and second figures are signficant digits, and the third figure expresses the number of zeros which follow the two figures. If there is a decimal point, it is expressed by the capital letter "**R**". In this case, all figures are significant digits.

Ex.)

Code	Resistance
202	2kΩ
203	20kΩ

❺Resistance Tolerance

Code	Resistance Tolerance
E	±3%
F	±1%

❻Individual Specifications

Code	Individual Specifications
E1	Lead Style, others

❼Packaging

Code	Packaging
A0	Ammo Pack
B0	Bulk

Pyroelectric Infrared Sensors

(Global Part Number) **IR** **A-** **E710ST** **1**
❶ ❷ ❸ ❹

❶Product ID
❷Type
❸Characteristics
❹Individual Specification Code

* Global Part Number shows only an example which might be different from actual part number.
* "❸Characteristics" and "❹Individual Specification Code" might have different digit number from actual Global Part Number.

Pyroelectric Infrared Sensor Modules

(Global Part Number) **IM** **D-** **B101-** **01**
❶ ❷ ❸ ❹

❶Product ID
❷Type
❸Characteristics
❹Individual Specification Code

* Global Part Number shows only an example which might be different from actual part number.
* "❸Characteristics" and "❹Individual Specification Code" might have different digit number from actual Global Part Number.

Ultrasonic Sensors

(Global Part Number) **MA** **40MF** **14** **-1N** **-M**
❶ ❷ ❸ ❹ ❺

❶Product ID
❷Series
❸Characteristics
❹Individual Specification Code
❺Packaging

* Global Part Number shows only an example which might be different from actual part number.
* Any other definitions than "❶Product ID" might have different digit numbers from actual Global Part Number.

Shock Sensors

(Global Part Number) **PK** | **GS-25** | **ME** | **1** | **-R**
❶ ❷ ❸ ❹ ❺

❶Product ID
❷Series
❸Characteristics
❹Individual Specification Code
❺Packaging

* Global Part Number shows only an example which might be different from actual part number.
* "❸Characteristics" , "❹Individual Specification Code" and "❺Packaging" might have different digit number from actual Global Part Number.

Built-in Circuit Acceleration Sensors

(Global Part Number) **PK** | **GA-S** | **60A** | | **-M**
❶ ❷ ❸ ❹ ❺

❶Product ID
❷Series
❸Characteristics
❹Individual Specification Code
❺Packaging

* Global Part Number shows only an example which might be different from actual part number.
* Any other definitions than "❶Product ID" might have different digit number from actual Global Part Number.

Piezoelectric Gyroscopes (GYROSTAR®)

(Global Part Number) **EN** | **C-03JA** | **-02** | |
❶ ❷ ❸ ❹

❶Product ID
❷Type
❸Individual Specification Code
❹Packaging

* Global Part Number shows only an example which might be different from actual part number.
* Any other definitions than "❶Product ID" might have different digit number from actual Global Part Number.

Non-contact Potentiometers

(Global Part Number) **LP** | **05M** | **4R1AA** |
❶ ❷ ❸ ❹

❶Product ID
❷Type
❸Characteristics
❹Individual Specification Code

* Global Part Number shows only an example which might be different from actual part number.
* Any other definitions than "❶Product ID" might have different digit number from actual Global Part Number.

Rotary Sensors

(Global Part Number) **FR** | **05CM** | **12AL** |
❶ ❷ ❸ ❹

❶Product ID
❷Type
❸Characteristics
❹Individual Specification Code

* Global Part Number shows only an example which might be different from actual part number.
* Any other definitions than "❶Product ID" might have different digit number from actual Global Part Number.

Magnetic Pattern Recognition Sensors

(Global Part Number) **BS** | **05W** | **1KFAB** |
❶ ❷ ❸ ❹

❶Product ID
❷Type
❸Characteristics
❹Individual Specification Code

* Global Part Number shows only an example which might be different from actual part number.
* Any other definitions than "❶Product ID" might have different digit number from actual Global Part Number.

Electric Potential Sensors

(Global Part Number) **PK** | **E05** | **A** |
❶ ❷ ❸ ❹

❶Product ID
❷Series
❸Characteristics
❹Individual Specification Code

* Global Part Number shows only an example which might be different from actual part number.
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   ④ Power plant equipment
   ⑤ Medical equipment
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   ⑦ Traffic signal equipment
   ⑧ Disaster prevention / crime prevention equipment
   ⑨ Data-processing equipment
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