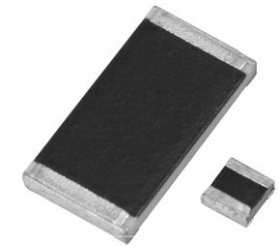
Thick Film Chip Resistors, Zero Ohm Jumper, Military/Established Reliability MIL-PRF-32159 Qualified, Type RCZ



FEATURES

HALOGEN FREE

- Fully conforms to the requirements of MIL-PRF-32159
- Established reliability - verified failure rate; M level
- Operating temperature range is - 55 °C to + 150 °C
- 100 % group A screening per MIL-PRF-32159
- Termination style B - tin/lead wraparound over nickel barrier
- For MIL-PRF-55342 chip resistors, see Vishay Dale's RCWPM (Military M/D55342) datasheet
- Halogen-free according to IEC 61249-2-21 definition

STANDARD ELECTRICAL SPECIFICATIONS

VISHAY DALE MODEL	MIL-PRF-32159 STYLE	MIL SPEC. SHEET	TERM.	CASE SIZE	POWER RATING $P_{70\,°C}$ W	CURRENT RATING A	MAXIMUM RESISTANCE Ω
RCWPM-0502-99	RCZ0502	01	B	0502	0.05	1.3	30m
RCWPM-550-99	RCZ0505	02	B	0505	0.100	2.2	20m
RCWPM-5100-99	RCZ1005	03	B	1005	0.20	2.8	25m
RCWPM-5150-99	RCZ1505	04	B	1505	0.15	2.1	35m
RCWPM-7225-99	RCZ2208	05	B	2208	0.225	2.5	35m
RCWPM-575-99	RCZ0705	06	B	0705 (1)	0.15	2.7	20m
RCWPM-1206-99	RCZ1206	07	B	1206	0.25	3.2	25m
RCWPM-2010-99	RCZ2010	08	B	2010	0.80	5.7	25m
RCWPM-2512-99	RCZ2512	09	B	2512	1.0	6.3	25m
RCWPM-1100-99	RCZ1010	10	B	1010	0.50	5.0	20m
RCWPM-0402-99	RCZ0402	11	B	0402	0.04	1.2	30m
RCWPM-0603-99	RCZ0603	12	B	0603	0.07	1.5	30m
RCWPM-0302-99	RCZ0302	13	B	0302	0.035	1.1	30m

Note

- DSCC has created a series of drawings to support the need for zero ohm jumper product. Vishay Dale is listed as a resource on these drawings as follows:

DSCC DRAWING NUMBER	VISHAY DALE MODEL	TERM.	MAXIMUM RESISTANCE mΩ	MAX. CURRENT RATING A	MAXIMUM WORKING VOLTAGE V
03011	RCWPM0201..99	B	50	0.5	30
03012	RCWPM0302..99	B	20	1.1	15
03014	RCWPM0402..99	B	25	1.2	30
88032	RCWPM0502..99	B	20	1.3	40
03013	RCWPM0603..99	B	25	1.5	50
03002	RCWPM0550..99	B	25	2.2	40
90048	RCWPM0575..99	B	20	2.7	50
90049	RCWPM5100..99	B	30	2.8	75
94011	RCWPM1206..99	B	20	3.2	100
90092	RCWPM5150..99	B	40	2.1	125
87011	RCWPM1100..99	B	20	5.0	75
90047	RCWPM7225..99	B	40	2.5	175
03015	RCWPM2010..99	B	40	5.7	150
03016	RCWPM2512..99	B	40	6.3	200

These drawings can be viewed at: www.dscc.dla.mil/Programs/MilSpec/ListDwgs.asp?DocType=DSCCdwg.

Note

(1) MIL case size 0705 and EIA case size 0805 are dimensionally the same.

RCWPM Jumper (Military M32159)

Vishay Dale Thick Film Chip Resistors, Zero Ohm Jumper, Military/Established Reliability MIL-PRF-32159 Qualified, Type RCZ

GLOBAL PART NUMBER INFORMATION

Part Number (MIL-PRF-32159): M32159B02MWB (preferred part number format)

M	3	2	1	5	9	B	0	2	M	W	B

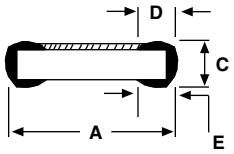
MIL STYLE	TERMINATION STYLE	SPEC SHEET	FAILURE RATE	PACKAGING
M32159	**B** = Pre-tinned nickel barrier, wraparound	(see Standard Electrical Specifications table)	**C** = Non-ER **M** = Military grade, high reliability	**TP** = Tin/lead, T/R (full) **S3** = Tin/lead, T/R (1000 pieces) **UL** = Tin/lead, T/R, single lot date code **WB** = Tin/lead, tray **WL** = Tin/lead, tray, single lot date code **S2** = Tin/lead, T/R (500 pieces) **S6** = Tin/lead, T/R (300 pieces)

Part Number (DSCC Drawings): RCWPM5100WB99

R	C	W	P	M	5	1	0	0	W	B	9	9

GLOBAL MODEL	PACKAGING	SPECIAL
RCWPM0201 RCWPM0302 RCWPM0402 RCWPM0502 RCWPM0550 RCWPM0575 RCWPM0603 RCWPM1100 RCWPM1206 RCWPM2010 RCWPM2512 RCWPM5100 RCWPM5150 RCWPM7225	**TP** = Tin/lead, T/R (full) **S3** = Tin/lead, T/R (1000 pieces) **UL** = Tin/lead, T/R, single lot date code **WB** = Tin/lead, tray **WL** = Tin/lead, tray, single lot date code **S2** = Tin/lead, T/R (500 pieces) **S6** = Tin/lead, T/R (300 pieces)	**99** = 0 Ω Jumper

DIMENSIONS in inches (millimeters)

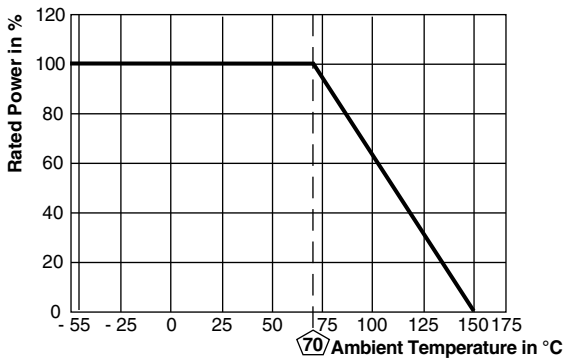


VISHAY DALE MODEL	MIL-PRF-32159 STYLE	MIL. SPEC. SHEET	A (LENGTH)	B (WIDTH)	C (HEIGHT)	D (TOP TERM)	E (BOTTOM TERM)
RCWPM-0502-99	RCZ0502	01	0.055 ± 0.005 (1.40 ± 0.13)	0.023 ± 0.003 (0.58 ± 0.08)	0.015 ± 0.003 (0.38 ± 0.08)	0.010 ± 0.005 (0.25 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-550-99	RCZ0505	02	0.055 ± 0.005 (1.40 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.010 ± 0.005 (0.25 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-5100-99	RCZ1005	03	0.105 ± 0.005 (2.67 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-5150-99	RCZ1505	04	0.155 ± 0.005 (3.94 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-7225-99	RCZ2208	05	0.230 ± 0.005 (5.84 ± 0.13)	0.075 ± 0.005 (1.91 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)
RCWPM-575-99	RCZ0705	06	0.080 ± 0.005 (2.03 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.016 ± 0.008 (0.41 ± 0.20)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-1206-99	RCZ1206	07	0.125 ± 0.005 (3.18 ± 0.13)	0.063 ± 0.005 (1.60 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-2010-99	RCZ2010	08	0.197 ± 0.006 (5.00 ± 0.15)	0.098 ± 0.005 (2.49 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)
RCWPM-2512-99	RCZ2512	09	0.250 ± 0.006 (6.35 ± 0.15)	0.124 ± 0.005 (3.15 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)

DIMENSIONS in inches (millimeters)

VISHAY DALE MODEL	MIL-PRF-32159 STYLE	MIL. SPEC. SHEET	A (LENGTH)	B (WIDTH)	C (HEIGHT)	D (TOP TERM)	E (BOTTOM TERM)
RCWPM-1100-99	RCZ1010	10	0.105 ± 0.005 (2.67 ± 0.13)	0.100 ± 0.005 (2.54 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-0402-99	RCZ0402	11	0.039 ± 0.003 (0.99 ± 0.08)	0.020 ± 0.003 (0.51 ± 0.08)	0.013 ± 0.003 (0.33 ± 0.08)	0.010 ± 0.005 (0.25 ± 0.13)	0.010 ± 0.005 (0.25 ± 0.13)
RCWPM-0603-99	RCZ0603	12	0.063 ± 0.005 (1.60 ± 0.13)	0.032 ± 0.005 (0.81 ± 0.13)	0.018 ± 0.005 (0.46 ± 0.13)	0.012 ± 0.005 (0.30 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-0302-99	RCZ0302	13	0.034 ± 0.004 (0.86 ± 0.10)	0.021 ± 0.003 (0.53 ± 0.08)	0.013 ± 0.003 (0.33 ± 0.08)	0.007 ± 0.005 (0.18 ± 0.13)	0.008 ± 0.005 (0.20 ± 0.13)
RCWPM-0201-99			0.024 ± 0.002 (0.61 ± 0.05)	0.012 ± 0.002 (0.30 ± 0.05)	0.009 ± 0.002 (0.23 ± 0.05)	0.006 ± 0.003 (0.15 ± 0.08)	0.006 + 0.002 - 0.004 (0.15 + 0.05 - 0.10)

DERATING CURVE



CAGE CODE: 91637 and SH903

MECHANICAL SPECIFICATIONS

Resistive element	Conductive metal
Encapsulation	Epoxy
Substrate	96 % alumina
Termination	Solder-coated nickel barrier
Solder finish	Tin/lead solder alloy

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