



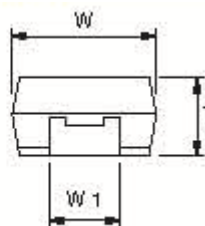
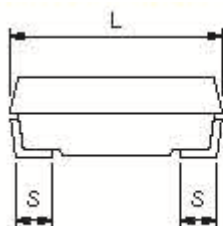
FEATURES

Small size – Low impedance – Halogen free epoxy – RoHS compliant –
Stable with temperature, applied voltage and frequency

APPLICATIONS

Decoupling – Noise suppression

Operating Temperature Range		-40°C to +105°C							
Capacitance Tolerance		+20% (M), -35% +10% (Y) 120 Hz, 20°C							
Surge Voltage	WVDC	2	2.5	4	6.3	10	12.5	16	
	SVDC	1.25*WVDC							
Dissipation Factor	WVDC	2	2.5	4	6.3	10	12.5	16	
	Tan δ	.06							
Leakage Current (25°C) MAX		Time		≤10 VDC			≥12.5 VDC		
		2 Minutes		0.04CV			0.1CV		
Load Life		1000 hours at 105°C with rated WVDC applied							
		Capacitance Change				≤10% of initial measured value			
		Dissipation Factor				≤100% of maximum specified value			
		Leakage Current				≤100% of maximum specified value			
Moisture Resistance Test		500 hours at 60°C and 90% relative Humidity with no voltage applied							
		Capacitance Change				≤20% to +70% of initially measured value			
		Dissipation Factor				≤200% of maximum specified value			
		Leakage Current				≤100% of maximum specified value			
Moisture Sensitivity Level (MSL)		3							



Case size	EIA Code	L±0.2	W±0.2	T±0.2	W1±0.1	S±0.3
G19	7343	7.3	4.3	1.9	2.4	1.3
G28	7343	7.3	4.3	2.8	2.4	1.3

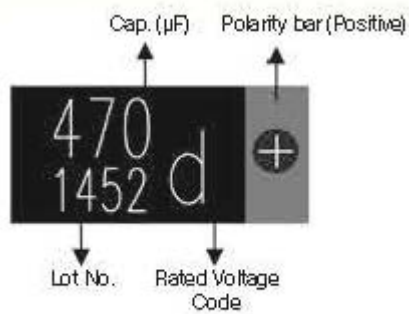
Markings

Recommended soldering profile

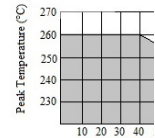
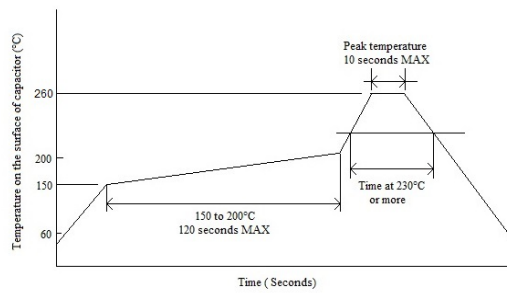
XMPL

Aluminum Polymer Capacitors

SMD Solid Conductive (multilayer-type)



Example: 470 μ F/2V



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XMPL

+105°C Multi-layer Low Profile Chip

Capacitance (μF)	WVDC	IC PART NUMBER	Maximum ESR (Ω) 120 Hz, +20°C	Maximum ESR (mΩ) 100 kHz, +20°C	Leakage Current (μA)	Maximum RMS Ripple Current (A) 100 kHz, +105°C	Dimensions LxHxT (mm)
6.8	16	685XMPL016MG19	14.6282	70	4.352	2	7.3x4.3x1.9
10	6.3	106XMPL6R3MG19	9.9472	40	2.52	1	7.3x4.3x1.9
10	10	106XMPL010MG19	9.9472	45	4	1	7.3x4.3x1.9
10	12	106XMPL012MG19	9.9472	55	4.8	1	7.3x4.3x1.9
10	16	106XMPL016MG19	9.9472	40	6.4	2	7.3x4.3x1.9
15	12	156XMPL012MG19	6.6315	45	7.2	1	7.3x4.3x1.9
15	16	156XMPL016MG19	6.6315	40	9.6	3	7.3x4.3x1.9
22	6.3	226XMPL6R3MG19	4.5214	35	5.544	1	7.3x4.3x1.9
22	10	226XMPL010MG19	4.5214	40	8.8	1.8	7.3x4.3x1.9
22	12	226XMPL012MG19	4.5214	30	10.56	1.8	7.3x4.3x1.9
22	16	226XMPL016MG19	4.5214	40	14.08	3	7.3x4.3x1.9
22	16	226XMPL016MG28	4.5214	40	14.08	3	7.3x4.3x2.8
33	6.3	336XMPL6R3MG19	3.0143	25	8.316	1.8	7.3x4.3x1.9
33	10	336XMPL010MG19	3.0143	40	13.2	2	7.3x4.3x1.9
33	12	336XMPL012MG28	3.0143	25	15.84	2	7.3x4.3x2.8
47	6.3	476XMPL6R3MG19	2.1164	25	11.844	1.8	7.3x4.3x1.9
47	10	476XMPL010MG19	2.1164	40	18.8	3	7.3x4.3x1.9
47	12	476XMPL012MG28	2.1164	20	22.56	2	7.3x4.3x2.8
68	4	686XMPL004MG19	1.4628	20	10.88	1.9	7.3x4.3x1.9
68	6.3	686XMPL6R3MG19	1.4628	15	17.136	2	7.3x4.3x1.9
68	10	686XMPL010MG28	1.4628	40	27.2	3	7.3x4.3x2.8
82	4	826XMPL004MG19	1.2131	9	13.12	3	7.3x4.3x1.9
100	2	107XMPL002MG19	0.9947	16	8	2	7.3x4.3x1.9
100	4	107XMPL004MG19	0.9947	9	16	3	7.3x4.3x1.9
100	6.3	107XMPL6R3MG19	0.9947	15	25.2	2.7	7.3x4.3x1.9
100	6.3	107XMPL6R3MG19H	0.9947	12	25.2	2.7	7.3x4.3x1.9
120	6.3	127XMPL6R3MG19	0.8289	15	30.24	2.7	7.3x4.3x1.9
120	6.3	127XMPL6R3MG19H	0.8289	12	30.24	2.7	7.3x4.3x1.9
120	6.3	127XMPL6R3MG19X	0.8289	9	30.24	2.7	7.3x4.3x1.9
150	2	157XMPL002MG19	0.6631	9	12	3	7.3x4.3x1.9
150	2.5	157XMPL2R5MG19	0.6631	9	15	3	7.3x4.3x1.9
150	2.5	157XMPL2R5MG28	0.6631	9	15	3	7.3x4.3x2.8
150	4	157XMPL004MG19	0.6631	12	24	3	7.3x4.3x1.9
150	4	157XMPL004MG19R	0.6631	7	24	3	7.3x4.3x1.9
150	4	157XMPL004MG19X	0.6631	9	24	3	7.3x4.3x1.9
150	6.3	157XMPL6R3MG19H	0.6631	12	37.8	3	7.3x4.3x1.9
150	6.3	157XMPL6R3MG19X	0.6631	9	37.8	3	7.3x4.3x1.9
150	6.3	157XMPL6R3MG28	0.6631	15	37.8	3	7.3x4.3x2.8
150	6.3	157XMPL6R3MG19	0.6631	15	37.8	3	7.3x4.3x1.9
150	6.3	157XMPL6R3MG28H	0.6631	12	37.8	3	7.3x4.3x2.8
150	6.3	157XMPL6R3MG28X	0.6631	9	37.8	3	7.3x4.3x2.8
180	2	187XMPL002MG19	0.5526	9	14.4	2.7	7.3x4.3x1.9
180	2.5	187XMPL2R5MG19	0.5526	9	18	3	7.3x4.3x1.9
180	2.5	187XMPL2R5MG28	0.5526	9	18	3	7.3x4.3x2.8
180	4	187XMPL004MG19H	0.5526	12	28.8	3	7.3x4.3x1.9
180	4	187XMPL004MG19R	0.5526	7	28.8	3	7.3x4.3x1.9
180	4	187XMPL004MG19X	0.5526	9	28.8	3	7.3x4.3x1.9
180	4	187XMPL004MG28H	0.5526	12	28.8	3	7.3x4.3x2.8
180	4	187XMPL004MG28R	0.5526	7	28.8	3	7.3x4.3x2.8
180	4	187XMPL004MG28X	0.5526	9	28.8	3	7.3x4.3x2.8
180	6.3	187XMPL6R3MG19	0.5526	15	45.36	2.7	7.3x4.3x1.9
220	2	227XMPL002MG19	0.4521	15	17.6	3	7.3x4.3x1.9
220	2.5	227XMPL2R5MG19X	0.4521	9	22	3	7.3x4.3x1.9
220	2.5	227XMPL2R5MG28H	0.4521	12	22	3	7.3x4.3x2.8
220	2.5	227XMPL2R5MG28R	0.4521	7	22	3	7.3x4.3x2.8
220	2.5	227XMPL2R5MG28X	0.4521	9	22	3	7.3x4.3x2.8
220	2.5	227XMPL2R5MG19H	0.4521	12	22	3	7.3x4.3x1.9
220	2.5	227XMPL2R5MG19R	0.4521	7	22	3	7.3x4.3x1.9

XMPL

+105°C Multi-layer Low
Profile Chip

Capacitance (μ F)	WVDC	IC PART NUMBER	Maximum ESR (Ω) 120 Hz, +20°C	Maximum ESR (m Ω) 100 kHz, +20°C	Leakage Current (μ A)	Maximum RMS Ripple Current (A) 100 kHz, +105°C	Dimensions LxHxT (mm)
220	4	227XMPL004MG28X	0.4521	9	35.2	3	7.3x4.3x2.8
220	4	227XMPL004MG19X	0.4521	9	35.2	3	7.3x4.3x1.9
220	4	227XMPL004MG28H	0.4521	12	35.2	3	7.3x4.3x2.8
220	4	227XMPL004MG28R	0.4521	7	35.2	3	7.3x4.3x2.8
220	4	227XMPL004MG19H	0.4521	12	35.2	3	7.3x4.3x1.9
220	4	227XMPL004MG19R	0.4521	7	35.2	3	7.3x4.3x1.9
220	6.3	227XMPL6R3MG19	0.4521	10	55.44	3	7.3x4.3x1.9
220	6.3	227XMPL6R3MG28	0.4521	10	55.44	3	7.3x4.3x2.8
270	2	277XMPL002MG19X	0.3684	9	21.6	3	7.3x4.3x1.9
270	2		0.3684	9	21.6	3	7.3x4.3x1.9
270	2	277XMPL002MG19H	0.3684	12	21.6	3	7.3x4.3x1.9
270	2	277XMPL002MG19R	0.3684	6	21.6	3	7.3x4.3x1.9
270	2.5	277XMPL2R5MG28X	0.3684	9	27	3	7.3x4.3x2.8
270	2.5	277XMPL2R5MG19X	0.3684	9	27	3	7.3x4.3x1.9
270	2.5	277XMPL2R5MG28H	0.3684	12	27	3	7.3x4.3x2.8
270	2.5	277XMPL2R5MG28R	0.3684	7	27	3	7.3x4.3x2.8
270	2.5	277XMPL2R5MG19H	0.3684	12	27	3	7.3x4.3x1.9
270	2.5	277XMPL2R5MG19R	0.3684	7	27	3	7.3x4.3x1.9
270	4	277XMPL004MG19H	0.3684	12	43.2	2.7	7.3x4.3x1.9
270	4	277XMPL004MG19R	0.3684	7	43.2	2.7	7.3x4.3x1.9
270	4	277XMPL004MG19X	0.3684	9	43.2	2.7	7.3x4.3x1.9
330	2	337XMPL002MG19R	0.3014	6	26.4	3	7.3x4.3x1.9
330	2	337XMPL002MG19X	0.3014	9	26.4	3	7.3x4.3x1.9
330	2	337XMPL002MG28H	0.3014	12	26.4	3	7.3x4.3x2.8
330	2	337XMPL002MG19H	0.3014	12	26.4	3	7.3x4.3x1.9
330	2	337XMPL002MG19A	0.3014	4.5	26.4	3	7.3x4.3x1.9
330	2	337XMPL002MG28X	0.3014	9	26.4	3	7.3x4.3x2.8
330	2	337XMPL002MG28A	0.3014	4.5	26.4	3	7.3x4.3x2.8
330	2	337XMPL002MG28R	0.3014	6	26.4	3	7.3x4.3x2.8
330	2.5	337XMPL2R5MG19R	0.3014	6	33	3	7.3x4.3x1.9
330	2.5	337XMPL2R5MG19H	0.3014	12	33	3	7.3x4.3x1.9
330	2.5	337XMPL2R5MG19A	0.3014	4.5	33	3	7.3x4.3x1.9
330	2.5	337XMPL2R5MG19X	0.3014	9	33	3	7.3x4.3x1.9
330	4	337XMPL004YG19R	0.3014	7	52.8	2.7	7.3x4.3x1.9
330	4	337XMPL004YG19H	0.3014	12	52.8	2.7	7.3x4.3x1.9
330	4	337XMPL004YG19X	0.3014	9	52.8	2.7	7.3x4.3x1.9
330	6.3	337XMPL6R3YG19	0.3014	10	83.2	3	7.3x4.3x1.9
330	6.3	337XMPL6R3YG28	0.3014	10	83.2	3	7.3x4.3x2.8
390	2	397XMPL002MG19X	0.2551	9	31.2	3	7.3x4.3x1.9
390	2	397XMPL002MG19A	0.2551	4.5	31.2	3	7.3x4.3x1.9
390	2	397XMPL002MG19R	0.2551	6	31.2	3	7.3x4.3x1.9
390	2.5	397XMPL2R5MG19X	0.2551	9	39	3	7.3x4.3x1.9
390	2.5	397XMPL2R5MG19R	0.2551	6	39	3	7.3x4.3x1.9
390	2.5	397XMPL2R5MG19H	0.2551	12	39	3	7.3x4.3x1.9
390	2.5	397XMPL2R5MG19A	0.2551	4.5	39	3	7.3x4.3x1.9
470	2	477XMPL002MG19A	0.2116	4.5	37.6	3	7.3x4.3x1.9
470	2	477XMPL002MG28R	0.2116	6	37.6	3	7.3x4.3x2.8
470	2	477XMPL002MG28A	0.2116	4.5	37.6	3	7.3x4.3x2.8
470	2	477XMPL002MG19X	0.2116	9	37.6	3	7.3x4.3x1.9
470	2	477XMPL002MG19R	0.2116	6	37.6	3	7.3x4.3x1.9
470	2	477XMPL002MG28X	0.2116	9	37.6	3	7.3x4.3x2.8
470	2.5	477XMPL2R5YG19H	0.2116	12	47	3	7.3x4.3x1.9
470	2.5	477XMPL2R5YG19A	0.2116	4.5	47	3	7.3x4.3x1.9
470	2.5	477XMPL2R5YG19R	0.2116	6	47	3	7.3x4.3x1.9
470	2.5	477XMPL2R5YG19X	0.2116	9	47	3	7.3x4.3x1.9
470	2.5	477XMPL2R5YG28A	0.2116	4.5	47	3	7.3x4.3x2.8
470	2.5	477XMPL2R5YG28H	0.2116	12	47	3	7.3x4.3x2.8
470	2.5	477XMPL2R5YG28R	0.2116	6	47	3	7.3x4.3x2.8

XMPL

**+105°C Multi-layer Low
Profile Chip**

Capacitance (μ F)	WVDC	IC PART NUMBER	Maximum ESR (Ω) 120 Hz, +20°C	Maximum ESR (m Ω) 100 kHz, +20°C	Leakage Current (μ A)	Maximum RMS Ripple Current (A) 100 kHz, +105°C	Dimensions LxHxT (mm)
470	2.5	477XMPL2R5YG28X	0.2116	9	47	3	7.3x4.3x2.8