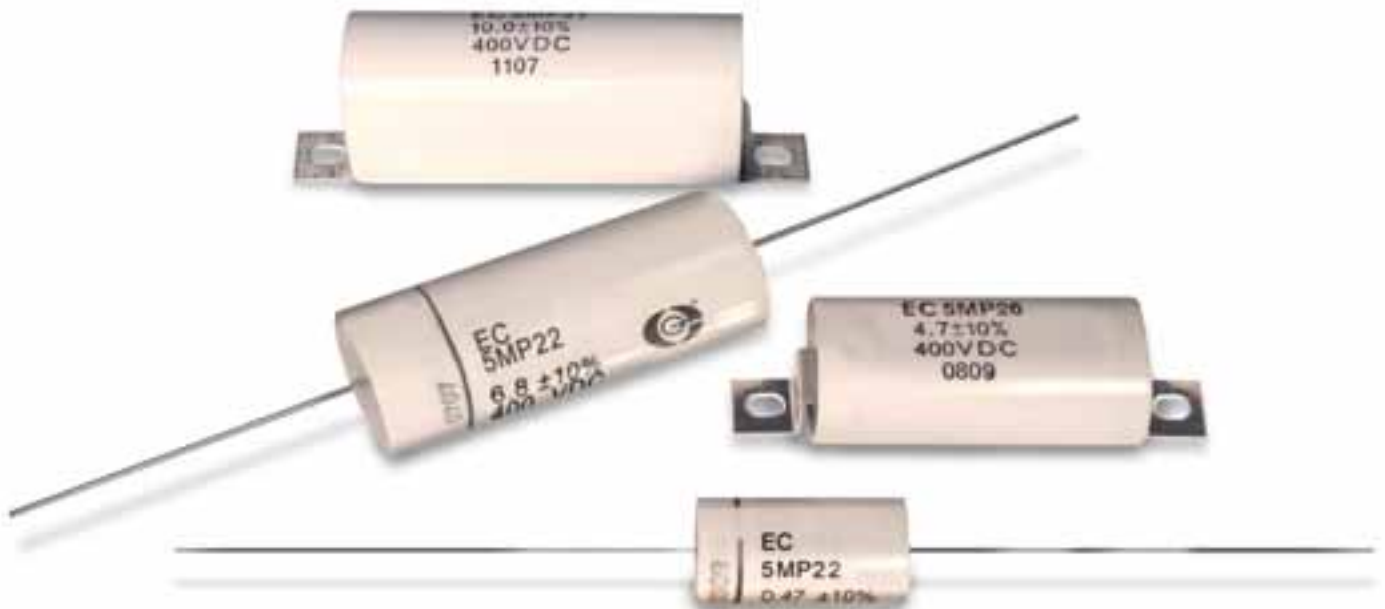


5MP2 SERIES

Metallized Polypropylene

Metallized Polypropylene

Switching power supply capacitors that require snubber and high current applications. Voltage: 400 to 2000 VDC; Capacitance as high as 10.0 μ F; ESR as low as 0.005 OHMS; ESL as low as 18nH; RMS current to 48.4 amps; UL94V-0 flame retardant; three configurations; with axial leads or tab terminations.



FEATURES

- Low loss polypropylene dielectric
- High power rugged construction
- Tested for high peak currents
- Smaller size
- UL94V-0 flame retardant
- Low inductance
- High RMS capability
- Low impedance and ESR
- RoHS compliant

STANDARD CONFIGURATION

- 5MP22: axial leads
- 5MP26: radial tabs/low profile
- 5MP27: radial tabs/high profile

Specification Summary

Capacitance Range

0.47 μ F to 10.0 μ F

Capacitance Tolerance

Standard capacitance tolerance is $\pm 10\%$. Tolerances of $\pm 5\%$, $\pm 2\%$ & $\pm 1\%$ are also available.

Operating Temperature Range

-55°C to +105°C

Enclosure/Construction

Polypropylene film in a polyester wrap with epoxy endfill. Terminals are tin plated copper.

Voltage Rating

VDC: 400VDC to 2000VDC

VAC: 230VAC to 460VAC

Quality Control

Capacitors are tested 100% for:

- Capacitance
- Tolerance
- Dissipation Factor
- Dielectric withstanding voltage
- Insulation Resistance
- Equivalent Series Resistance (ESR)

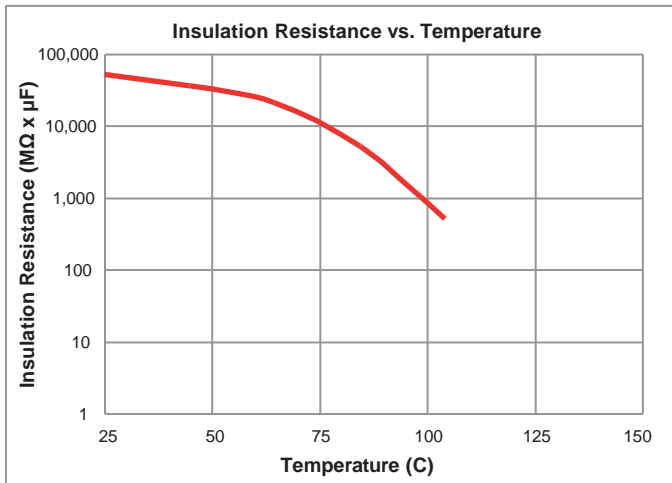
Process and inspection data are maintained on file and available upon special request.

Environmental

Parameter	Method	Condition
Vibration	204	D
Shock	213	I
Humidity	106	-
Thermal Shock	107	A
Life	108	F

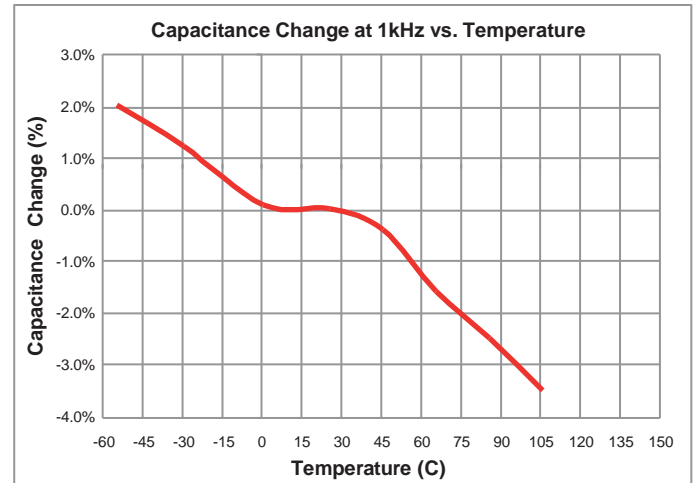
Reference MIL-STD-202

Characteristics



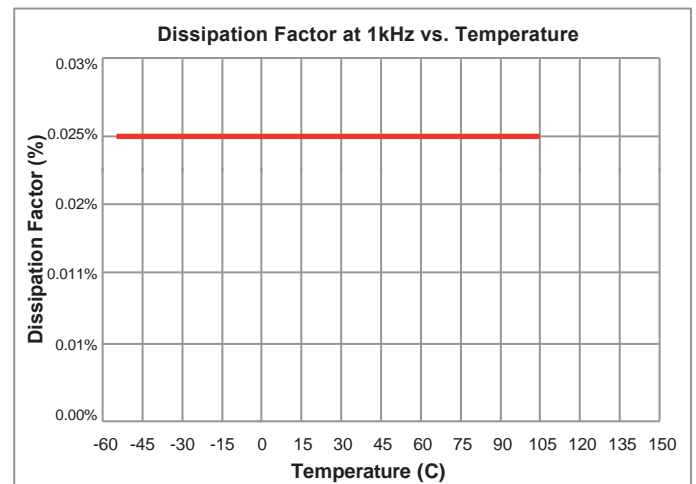
Dielectric Strength

Capacitors withstand a DC potential of 1.5 x rated voltage for one (1) minute without damage or breakdown. Test voltage is applied and discharged through a minimum resistance of 100 OHM per volt minimum.



Dissipation Factor

Polypropylene has an intrinsic dissipation factor of less than 2.1×10^{-4} over the operating temperature range of -55°C to +105°C and frequencies to 1MHz.



Detail Data

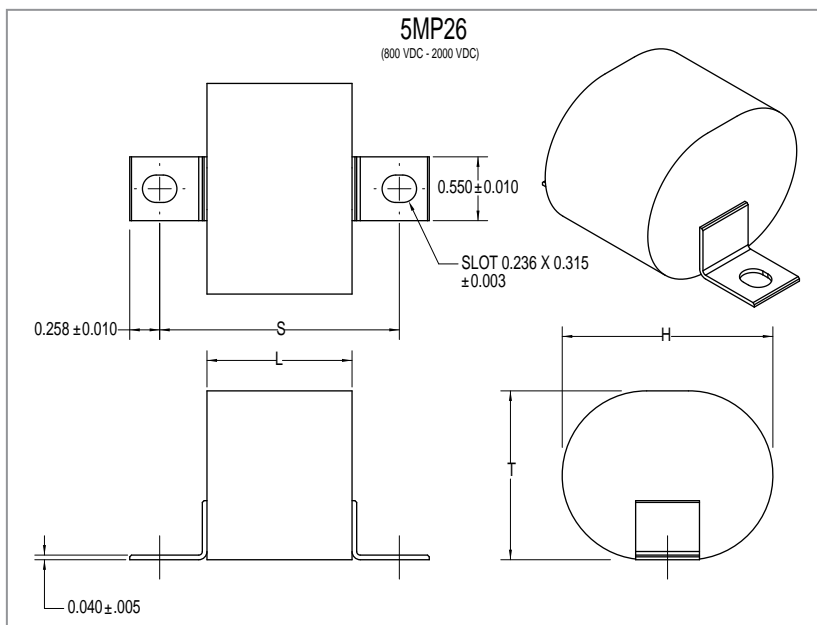
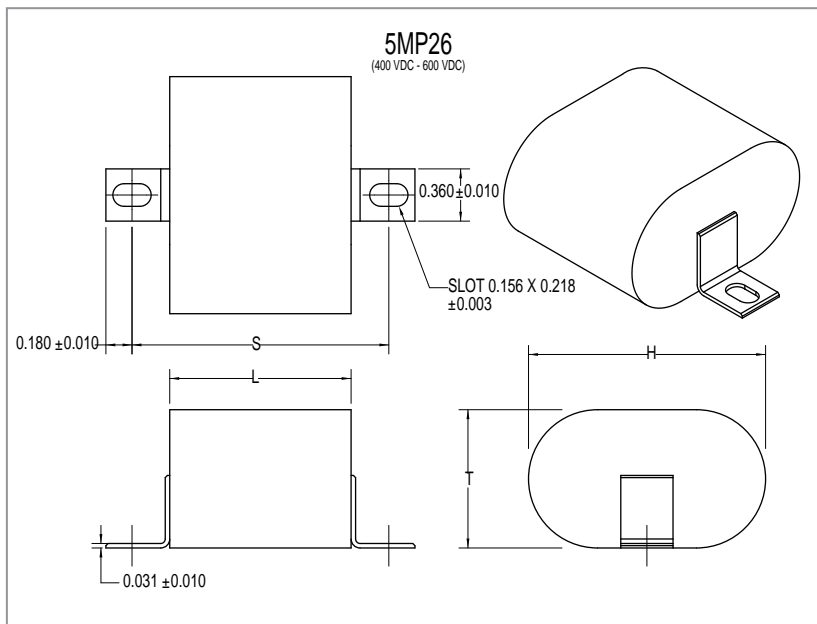
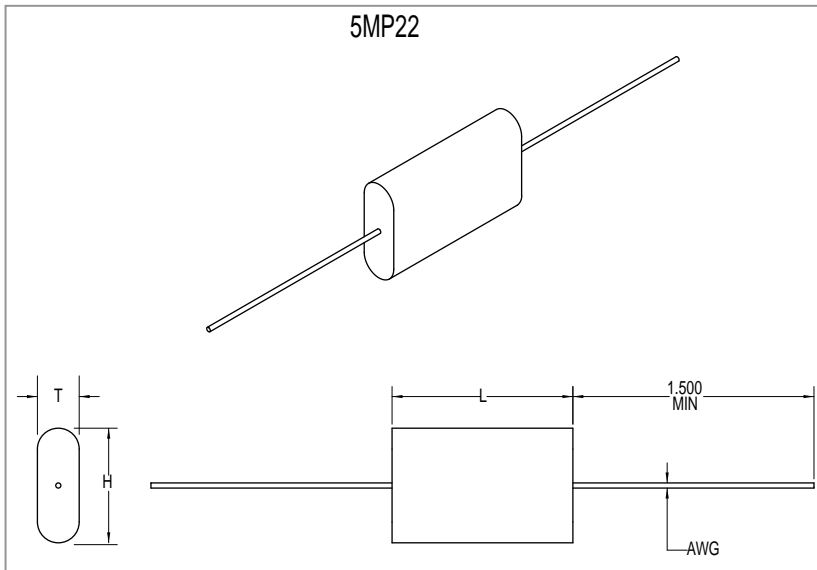
PART NUMBER	CAP μF	VOLTAGE VDC	VOLTAGE VAC	ESR 100 kHz OHMS MAX	MAXIMUM RIPPLE CURRENT IN AMPS 10kHz				I PEAK AMPS	dv/dt V/μs	(TYP) "ESL" nH	(TYPICAL) "f" RES kHz
					TEMPERATURES							
					25°C	50°C	85°C	105°C				
5MP2_J474K	0.47	400	230	0.016	5.3	4.4	2.7	0.7	79	168	18	1710
5MP2_J684K	0.68	400	230	0.015	6.2	5.2	3.2	0.8	97	143	22	1312
5MP2_J105K	1.0	400	230	0.010	8.1	6.8	4.2	1.0	143	143	22	1082
5MP2_J155K	1.5	400	230	0.007	10.8	8.9	5.5	1.3	214	143	22	884
5MP2_J205K	2.0	400	230	0.006	13.1	10.9	6.7	1.6	285	143	22	765
5MP2_J225K	2.2	400	230	0.006	14	11.6	7.1	1.7	314	143	22	730
5MP2_J335K	3.3	400	230	0.005	16.5	13.7	8.4	2.0	471	143	22	596
5MP2_J475K	4.7	400	230	0.006	17.2	14.3	8.8	2.1	421	89	35	392
5MP2_J685K	6.8	400	230	0.007	18	15	9.2	2.2	443	65	50	274
5MP2_J106K	10.0	400	230	0.005	23.2	19.3	11.9	2.8	652	65	50	226
5MP2_K474K	0.47	600	230	0.011	7.9	6.6	4.1	1.0	118	251	18	1710
5MP2_K684K	0.68	600	230	0.008	10.3	8.6	5.3	1.3	171	251	18	1422
5MP2_K105K	1.0	600	230	0.006	13.5	11.2	6.9	1.6	251	251	18	1173
5MP2_K155K	1.5	600	230	0.005	16	13.3	8.2	1.9	321	214	22	884
5MP2_K205K	2.0	600	230	0.005	17.5	14.6	9	2.1	428	214	22	765
5MP2_K225K	2.2	600	230	0.010	13.5	11.2	6.9	1.6	249	113	42	522
5MP2_K335K	3.3	600	230	0.007	17.9	14.9	9.1	2.2	373	113	42	426
5MP2_K475K	4.7	600	230	0.006	22.7	18.9	11.6	2.8	532	113	42	357
5MP2_N305K	3.0	800	230	0.005	41.9	34.9	21.4	5.1	856	285	22	625
5MP2_N405K	4.0	800	230	0.005	42.6	35.5	21.8	5.2	880	220	28	473
5MP2_N505K	5.0	800	230	0.005	42.7	35.6	21.8	5.2	895	179	35	379
5MP2_N605K	6.0	800	230	0.005	42.7	35.5	21.8	5.2	905	151	42	316
5MP2_N705K	7.0	800	230	0.005	42.5	35.3	21.7	5.2	913	130	50	270
5MP2_N805K	8.0	800	230	0.005	42.3	35.2	21.6	5.1	918	115	57	236
5MP2_BN105K	1.0	1200	460	0.005	37.5	31.2	19.2	4.6	1076	1076	20	1120
5MP2_BN155K	1.5	1200	460	0.005	42.3	35.2	21.6	5.1	1143	762	28	782
5MP2_BN205K	2.0	1200	460	0.005	45.8	38.1	23.4	5.6	1219	610	34	609
5MP2_BN255K	2.5	1200	460	0.005	47.9	39.9	24.5	5.8	1270	508	41	498
5MP2_BN305K	3.0	1200	460	0.005	48.4	40.3	24.7	5.9	1276	425	49	416
5MP2_BN335K	3.3	1200	460	0.005	47.1	39.2	24.1	5.7	1232	373	56	371
5MP2_BT105K	1.0	1600	460	0.005	34.6	28.8	17.7	4.2	813	813	34	862
5MP2_BT135K	1.3	1600	460	0.005	37.8	31.4	19.3	4.6	881	677	41	691
5MP2_BT155K	1.5	1600	460	0.005	37.3	31.0	19.0	4.5	851	567	49	588
5MP2_BT185K	1.8	1600	460	0.005	39.1	32.5	20.0	4.8	896	498	56	502
5MP2_P105K	1.0	2000	460	0.005	33.7	28.0	17.2	4.1	709	709	49	721
5MP2_P125K	1.2	2000	460	0.005	35.5	29.5	18.1	4.3	746	622	56	615

Note: RMS current ratings based on maximum capability of the capacitor element. For capacitor style with leads, the RMS current rating is limited by the lead wire as follows: #16: 19 AMPS; #18: 16 AMPS; #20: 12 AMPS.

Detail Data

PART NUMBER	CAP μF	AXIAL LEADS 5MP22				LOW PROFILE 5MP26				HIGH PROFILE 5MP27			
		T MAX	H MAX	L ±0.062	AWG	T MAX	H MAX	L ±0.062	S + 0.093, -0.062	T MAX	H MAX	L ±0.062	S + 0.093, -0.062
5MP2_J474K	0.47	0.260	0.453	1.125	20	-	-	-	-	-	-	-	-
5MP2_J684K	0.68	0.294	0.486	1.250	20	-	-	-	-	-	-	-	-
5MP2_J105K	1.0	0.366	0.559	1.250	20	-	-	-	-	-	-	-	-
5MP2_J155K	1.5	0.461	0.653	1.250	20	-	-	-	-	-	-	-	-
5MP2_J205K	2.0	0.541	0.734	1.250	20	-	-	-	-	-	-	-	-
5MP2_J225K	2.2	0.539	0.794	1.250	20	-	-	-	-	-	-	-	-
5MP2_J335K	3.3	0.681	0.953	1.250	20	0.953	0.681	1.250	1.690	0.681	0.953	1.250	1.690
5MP2_J475K	4.7	0.638	0.893	1.750	18	0.893	0.638	1.750	2.190	0.638	0.893	1.750	2.190
5MP2_J685K	6.8	0.658	0.912	2.250	18	0.912	0.658	2.250	2.690	0.658	0.912	2.250	2.690
5MP2_J106K	10.0	0.817	1.072	2.250	18	1.072	0.817	2.250	2.690	0.817	1.072	2.250	2.690
5MP2_K474K	0.47	0.418	0.611	1.125	20	-	-	-	-	-	-	-	-
5MP2_K684K	0.68	0.514	0.707	1.125	20	-	-	-	-	-	-	-	-
5MP2_K105K	1.0	0.635	0.828	1.125	20	0.828	0.635	1.125	1.565	0.635	0.828	1.125	1.565
5MP2_K155K	1.5	0.726	0.919	1.250	20	0.919	0.726	1.250	1.690	0.726	0.919	1.250	1.690
5MP2_K205K	2.0	0.848	1.041	1.250	20	1.041	0.848	1.250	1.690	0.848	1.041	1.250	1.690
5MP2_K225K	2.2	0.632	0.825	2.000	18	0.825	0.632	2.000	2.440	0.632	0.825	2.000	2.440
5MP2_K335K	3.3	0.788	0.980	2.000	18	0.980	0.788	2.000	2.440	0.788	0.980	2.000	2.440
5MP2_K475K	4.7	0.953	1.145	2.000	18	1.145	0.953	2.000	2.440	0.953	1.145	2.000	2.440
5MP2_N305K	3.0	1.455	1.815	1.250	16	1.815	1.455	1.250	2.065	1.455	1.815	1.250	2.065
5MP2_N405K	4.0	1.455	1.815	1.500	16	1.815	1.455	1.500	2.315	1.455	1.815	1.500	2.315
5MP2_N505K	5.0	1.455	1.815	1.750	16	1.815	1.455	1.750	2.565	1.455	1.815	1.750	2.565
5MP2_N605K	6.0	1.455	1.815	2.000	16	1.815	1.455	2.000	2.815	1.455	1.815	2.000	2.815
5MP2_N705K	7.0	1.455	1.815	2.250	16	1.815	1.455	2.250	3.065	1.455	1.815	2.250	3.065
5MP2_N805K	8.0	1.455	1.815	2.500	16	1.815	1.455	2.500	3.315	1.455	1.815	2.500	3.315
5MP2_BN105K	1.0	1.455	1.815	1.250	16	1.815	1.455	1.250	2.035	1.455	1.815	1.250	2.035
5MP2_BN155K	1.5	1.455	1.815	1.500	16	1.815	1.455	1.500	2.285	1.455	1.815	1.500	2.285
5MP2_BN205K	2.0	1.455	1.815	1.750	16	1.815	1.455	1.750	2.535	1.455	1.815	1.750	2.535
5MP2_BN255K	2.5	1.455	1.815	2.000	16	1.815	1.455	2.000	2.785	1.455	1.815	2.000	2.785
5MP2_BN305K	3.0	1.455	1.815	2.250	16	1.815	1.455	2.250	3.035	1.455	1.815	2.250	3.035
5MP2_BN335K	3.3	1.455	1.815	2.500	16	1.815	1.455	2.500	3.285	1.455	1.815	2.500	3.285
5MP2_BT105K	1.0	1.455	1.815	1.750	16	1.815	1.455	1.750	2.535	1.455	1.815	1.750	2.535
5MP2_BT135K	1.3	1.455	1.815	2.000	16	1.815	1.455	2.000	2.785	1.455	1.815	2.000	2.785
5MP2_BT155K	1.5	1.455	1.815	2.250	16	1.815	1.455	2.250	3.035	1.455	1.815	2.250	3.035
5MP2_BT185K	1.8	1.455	1.815	2.500	16	1.815	1.455	2.500	3.285	1.455	1.815	2.500	3.285
5MP2_P105K	1.0	1.455	1.815	2.250	16	1.815	1.455	2.250	3.035	1.455	1.815	2.250	3.035
5MP2_P125K	1.2	1.455	1.815	2.500	16	1.815	1.455	2.500	3.285	1.455	1.815	2.500	3.285

Dimensional Data



Dimensional Data

