

IGBT Snubber Capacitors - Screw Mount

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**RoHS
Compliant**

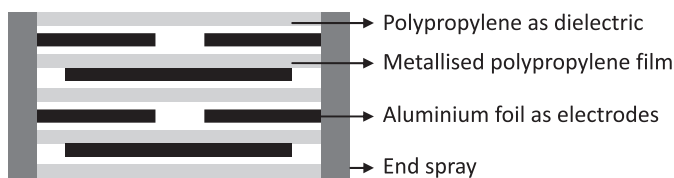


Features

- Self-healing property
- High DV / DT
- Low ESR
- Low loss polypropylene dielectric
- Reference standard-IEC 61071
- Flame retardant UI94

Construction

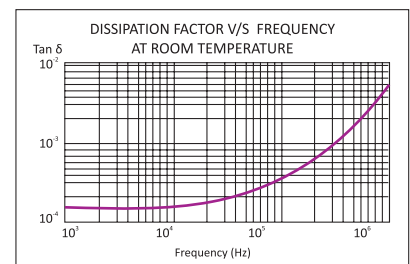
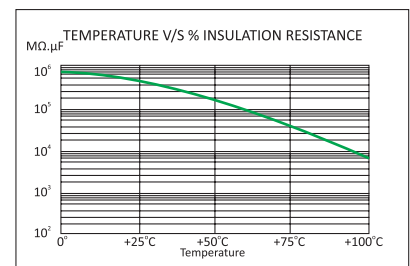
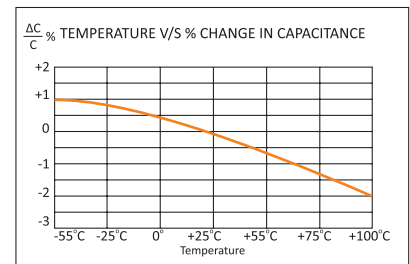
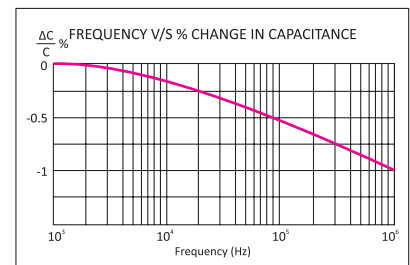
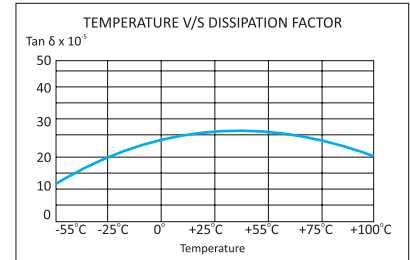
Extended foil electrodes with metallised polypropylene dielectric internal series connection



Applications

These capacitors are used in high voltage, high current and high pulse applications such as:

- IGBT protection circuits
- Snubber networks
- Energy conversion and control in power electronics
- Protection circuits in SMPS



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Technical Specifications

Physical Characteristics

Dielectric material	: Polypropylene film
Electrode material	: Aluminium foil and metallised polypropylene film
Winding construction	: Extended foil electrodes with metallised polypropylene dielectric internal series connection
Enclosure	: Preformed UI94 V-0 plastic case with thermosetting resin-fill

Electrical Characteristics

Capacitance range	: 0.22 μ F to 2.2 μ F
Capacity tolerance	: \pm 10%
Rated voltage V DC	: 1250, 1500
Rated voltage V AC	: 550, 630
Test voltage between terminals	: 1.6 x rated voltage V DC for 2 seconds
Test voltage terminal to case	: 3KV AC at 50Hz for 60 seconds
Dissipation factor (Tan d)	: 0.0005 at 1kHz and 25°
Temperature range	: -40°C to +85°C
Insulation resistance at 25°C & at a test voltage of 500 V DC applied for 1minute	: C 0.33 μ F 100,000M Ω : C>0.33 μ F 30,000M Ω

Marking on Capacitors

Each capacitor will have the following information printed on it, sequentially:

- The capacitor grade viz KPF
- The capacitance value μ F
- The rated voltage VDC
- Capacity tolerance and manufacturing code
- Part number on non-standard capacitors

Working voltage 1250 V DC (550 V AC)

Rated Capacitance μ F	DV/DT V/ μ Sec	Case Code	I Peak Amps	Terminal Style	Irms Max at 100kHz & 70°C Amps	Typical ESR at 100kHz m Ω	Part Number
2	800	E3	1600	RL	28.2	2.5	MP003969
				TL			MP004142
				MTL			MP004143
0.47	1200	B1	564	MTL	21.1	3.5	MP004124
				TL			MP004125
				RL			MP004148
0.68	1100	E1	748	RL	21.3	3.5	MP004127
				TL			MP004128
				MTL			MP004156

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Rated Capacitance μF	DV/DT $\text{V}/\mu\text{Sec}$	Case Code	I Peak Amps	Terminal Style	Irms Max at 100kHz & 70°C Amps	Typical ESR at 100kHz $\text{m}\Omega$	Part Number
1	1100	B2	1100	MTL	26	3	MP004130
				RL			MP004150
				TL			MP004151
1.2	800	E2	960	MTL	26	2.5	MP004132
				RL			MP004135
				TL			MP004136
1.5	800		1200	TL	26	2.5	MP004152
2.2	800	C2	1760	MTL	28.5	2.4	MP004145
				RL			MP004146
				TL			MP004147
0.22	1400	B1	308	MTL	18.2	4.2	MP004113
				RL			MP004114
				TL			MP004115

Working Voltage 1500V DC (630V AC)

Rated Capacitance μF	DV/DT $\text{V}/\mu\text{Sec}$	Case Code	I Peak Amps	Terminal Style	Irms Max at 100kHz & 70°C Amps	Typical ESR at 100kHz $\text{m}\Omega$	Part Number
0.22	1600	B1	352	MTL	18.2	4.2	MP004116
				RL			MP004117
				TL			MP004118
0.47	1400	E1	658	RL	21.1	3.5	MP004119
				MTL			MP004126
				TL			MP004149
0.68	1300	E2	884	RL	21.3	3.5	MP004120
				TL			MP004121
				MTL			MP004129
1.2	1300		1560	MTL	26	2.5	MP004137
				RL			MP004138
				TL			MP004139
1.5	1300	E3	1950	RL	26	2.5	MP004140
				TL			MP004141
				MTL			MP004153
2	1000	C2	2000	TL	28.2	2.5	MP004144
				RL			MP004154
				MTL			MP004155

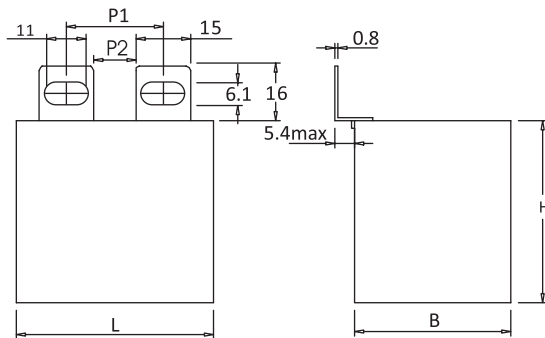
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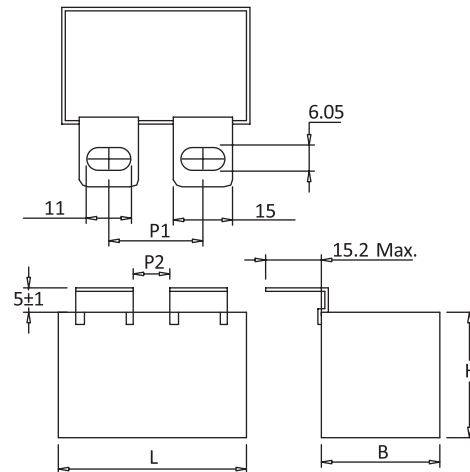
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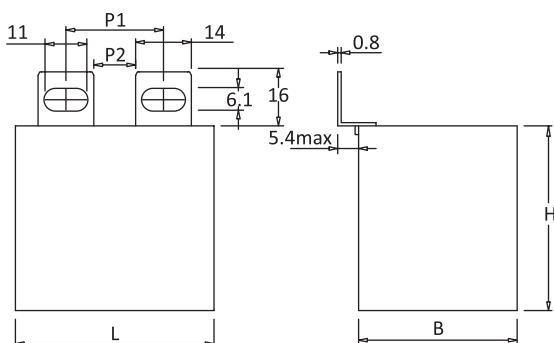
Capacitor Drawing and Terminal Style



Terminal style : TL
Case code : B1,E1,B2,E2,B3,E3,C2



Terminal style : RL
Case code : B1,E1,B2,E2,B3,E3,C2



Terminal style : MTL
Case code : B1,E1,B2,E2,B3,E3,C2

Dimensions : Millimetres

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Table of Case Codes and Dimensions

Case Code	Dimensions in mm"			P1	P2	Terminal Styles
	B ±1	H ±1	L ±1	P ±0.5		
B1	17	29	41.5	23.5	8.5	TL, RL.
B1	17	29	41.5	24.5	10.5	MTL
E1	20	36	42	23.5	8.5	TL, RL.
E1	20	36	42	24.5	10.5	MTL
B2	24	38	45	23.5	8.5	TL, RL.
B2	24	38	45	24.5	10.5	MTL
E2	35	42	45	27	11.5	TL, RL.
E2	35	42	45	27	13	MTL
B 3	30	45	45	26.5	11.5	TL, RL.
B3	30	45	45	27	13	MTL
E3	35	46	54	26.5	11.5	TL, RL.
E3	35	46	54	27	13	MTL
C2	43	50	54	26.5	11.5	TL,RL
C2	43	50	54	27	13	MTL

Precaution

1. These capacitors are not suitable for 'across the line' applications
2. V AC {rated}: Frequency should be less than 1000Hz
3. V DC {rated}: $1.4 \times V_{rms} + V_{DC}$ should be less than rated V DC
4. MAX ESR = Typical ESR +30%

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