

MP99L / MP99N IGBT MODULES

HIGH PEAK CURRENT-CARRYING CAPABILITY (dV/dt) 600-2000VDC

DESCRIPTION:

MP99L and MP99N are radial box film capacitors using double metallized polypropylene film with special tab terminations for direct connection with IGBT modules.

APPLICATIONS:

Protects against voltage transients for IGBT applications with high dV/dt requirements:

Connects directly to the IGBT module.

Ideal for use in SCR commutation, Switch Mode power supply protection, motor controls, inverters for UPS systems.

FEATURES:

Featuring high peak and RMS current capability along with low inductance.

Special terminal spacings available on request.

Designed to suppress transient voltage spikes and peak currents when IGBTs are switched off.

SPECIFICATIONS:

Voltage Range: 600-2000 VDC
(for VAC ratings see data tables)

Capacitance Tolerance: 5%(J) 10%(K)

Withstand Voltage: 160% of the rated voltage
for 60 seconds

Dissipation Factor: <0.1% at 1 KHz, +25°C

Temperature Coefficient: -200 (±100)ppm/°C

Capacitance Range: .015–4.7 μF

Operating Temperature: -55°C to 105°C
(full rated voltage at 85°C)

Insulation Resistance at 25°C (minimum IR) :
≥ 100,000mΩ (C≤0.33μF) @ 100VDC

Time Constant at 25°C :

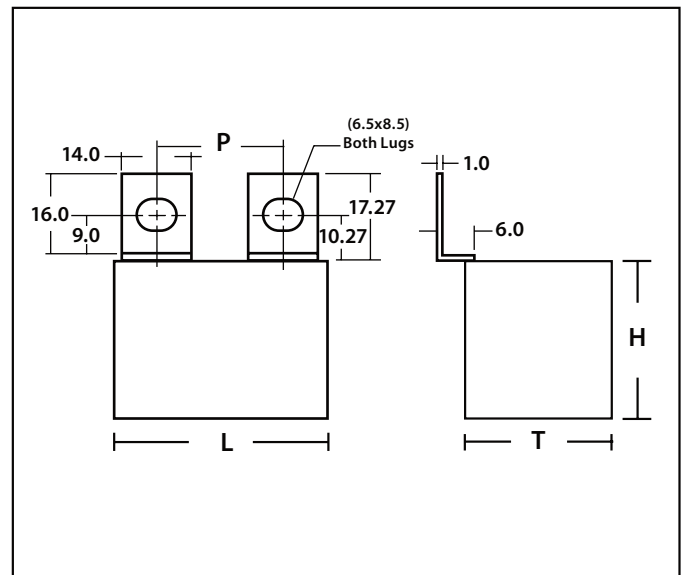
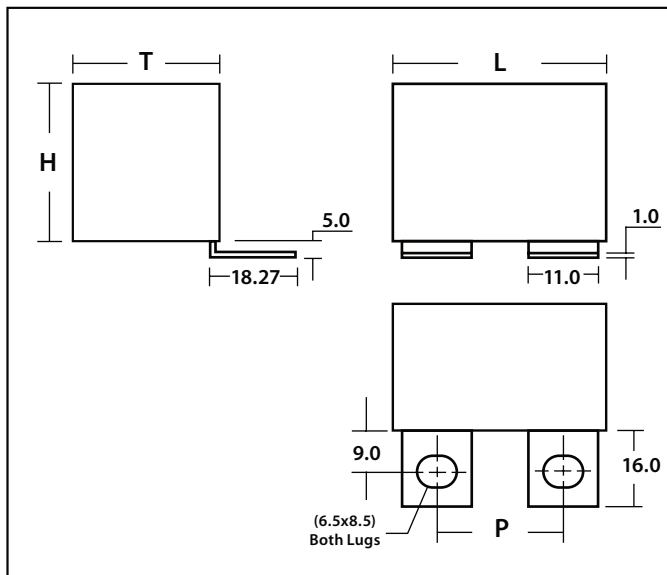
≥ 30,000mΩ x μF sec. (C>0.33μF) @ 100VDC

See data tables for ESR, I peak, I RMS

MP99L

Dimensions in mm

MP99N



MP99L / MP99N IGBT MODULES

HIGH PEAK CURRENT-CARRYING CAPABILITY (dV/dt) 600-2000VDC

Dimensions in mm

μF	L±1	T±1	H±1	P±1 **	Typical ESR milliohms	DV/dt V/us	I peak A	I RMS A
600VDC 275VAC								
0.33	45.0	33.0	23.0	23, 25	14.0	300	99	8.1
0.47	45.0	33.0	23.0	23, 25	12.0	250	118	9.0
0.56	45.0	33.0	23.0	23, 25	10.0	250	140	9.5
0.68	45.0	33.0	23.0	23, 25	9.0	200	136	11.6
1.0	45.0	33.0	23.0	23, 25	8.0	150	150	14.2
1.2	45.0	33.0	23.0	23, 25	8.0	150	180	15.2
1.5	45.0	33.0	23.0	23, 25	7.0	150	225	17.4
2.0	51.0	36.0	25.0	23, 25, 28	7.0	150	300	20.2
2.2	51.0	36.0	25.0	23, 25, 28	6.0	150	330	20.7
2.5	51.0	36.0	25.0	23, 25, 28	6.0	150	375	21.5
3.0	51.0	40.0	30.0	23, 25, 28	6.0	150	450	22.5
3.3	51.0	40.0	30.0	23, 25, 28	5.0	150	495	23.0
3.5	51.0	40.0	30.0	23, 25, 28	5.0	150	525	23.1
4.0	59.0	37.0	32.0	23, 25, 28	5.0	120	480	23.8
4.5	59.0	37.0	32.0	23, 25, 28	4.0	120	540	24.1
4.7	59.0	45.5	35.5	23, 25, 28	4.0	120	564	24.5
1000VDC 500VAC								
0.15	45.0	33.0	23.0	23, 25	28.0	750	113	7.0
0.22	45.0	33.0	23.0	23, 25	19.0	650	143	7.9
0.33	45.0	33.0	23.0	23, 25	13.0	500	165	8.7
0.47	45.0	33.0	23.0	23, 25	9.0	450	211	10.8
0.56	45.0	33.0	23.0	23, 25	9.0	400	224	11.3
0.68	45.0	33.0	23.0	23, 25	7.0	400	272	12.9
1.0	51.0	36.0	25.0	23, 25, 28	5.0	400	400	17.5
1.2	51.0	40.0	30.0	23, 25, 28	5.0	400	480	18.5
1.5	51.0	40.0	30.0	23, 25, 28	4.0	400	600	22.4
2.0	59.0	37.0	32.0	23, 25, 28	4.0	310	617	23.2
2.2	59.0	45.5	35.5	23, 25, 28	4.0	310	682	24.5
2.5	59.0	45.5	35.5	23, 25, 28	4.0	310	775	26.8
3.0	59.0	47.0	39.0	23, 25, 28	4.0	310	930	31.0
3.3	59.0	47.0	39.0	23, 25, 28	4.0	310	1023	31.9
3.5	59.0	47.0	39.0	23, 25, 28	4.0	310	1085	33.7
4.0	59.0	55.0	45.0	23, 25, 28	4.0	310	1240	35.4
4.5	59.0	55.0	45.0	23, 25, 28	4.0	310	1395	37.7

HOW TO ORDER

Example:	MP99L	1μF*	10%	1000VDC
	Series	*Capacitance	Tolerance	Voltage
Order:	MP99L	1004	K	1000

*For capacitance values, list three significant digits with fourth digit indicating number of zeros to follow.

Tolerance: J=5%, K=10%

**Specify lead spacing when ordering.

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HIGH PEAK CURRENT-CARRYING CAPABILITY (dV/dt) 600-2000VDC

Dimensions in mm

μF	L \pm 1	T \pm 1	H \pm 1	P \pm 1 **	Typical ESR milliohms	DV/dt V/us	I peak A	I RMS A
1200VDC 550VAC								
0.15	45.0	33.0	23.0	23, 25	28.0	750	113	7.0
0.22	45.0	33.0	23.0	23, 25	19.0	650	143	7.9
0.33	45.0	33.0	23.0	23, 25	13.0	500	165	8.7
0.47	51.0	36.0	25.0	23, 25, 28	10.0	500	235	12.0
0.56	51.0	36.0	25.0	23, 25, 28	9.0	500	280	13.2
0.68	51.0	40.0	30.0	23, 25, 28	7.0	500	340	15.1
1.0	51.0	40.0	30.0	23, 25, 28	5.0	500	500	18.5
1.2	59.0	37.0	32.0	23, 25, 28	5.0	400	480	19.3
1.5	59.0	45.5	35.5	23, 25, 28	4.0	400	600	23.9
2.0	59.0	47.0	39.0	23, 25, 28	4.0	400	800	30.1
2.2	59.0	47.0	39.0	23, 25, 28	4.0	400	880	31.3
2.5	59.0	55.0	45.0	23, 25, 28	4.0	400	1000	34.8
3.0	59.0	55.0	45.0	23, 25, 28	5.0	400	1200	39.6
1600VDC 630VAC								
0.15	45.0	33.0	23.0	23, 25	28.0	650	113	7.0
0.22	45.0	33.0	23.0	23, 25	19.0	650	143	7.9
0.33	45.0	33.0	23.0	23, 25	12.0	650	215	10.0
0.47	51.0	36.0	25.0	23, 25, 28	10.0	650	306	12.6
0.56	51.0	40.0	30.0	23, 25, 28	9.0	650	364	14.5
0.68	51.0	40.0	30.0	23, 25, 28	7.0	650	442	15.3
1.0	59.0	45.5	35.5	23, 25, 28	6.0	500	500	19.5
1.2	59.0	45.5	35.5	23, 25, 28	5.0	500	600	23.5
1.5	59.0	55.0	45.0	23, 25, 28	5.0	400	600	25.6
2.0	59.0	55.0	45.0	23, 25, 28	5.0	400	800	30.6
2000VDC 630VAC								
0.15	45.0	33.0	23.0	23, 25	26.0	800	120	7.5
0.22	45.0	33.0	23.0	23, 25	19.0	800	176	8.2
0.33	45.0	36.0	25.0	23, 25	13.0	800	264	10.5
0.47	51.0	40.0	30.0	23, 25, 28	10.0	800	376	13.5
0.56	59.0	37.0	32.0	23, 25, 28	9.0	600	336	15.0
0.68	59.0	45.5	35.5	23, 25, 28	8.0	600	408	16.1
1.0	59.0	47.0	39.0	23, 25, 28	6.0	600	600	21.3
1.2	59.0	55.0	45.0	23, 25, 28	5.0	600	720	25.8
1.5	59.0	55.0	45.0	23, 25, 28	5.0	600	900	28.2

HOW TO ORDER

Example:	MP99L	1 μF *	10%	1000VDC
	Series	*Capacitance	Tolerance	Voltage
Order:	MP99L	1004	K	1000

*For capacitance values, list three significant digits with fourth digit indicating number of zeros to follow.

Tolerance: J=5%, K=10%

**Specify lead spacing when ordering.