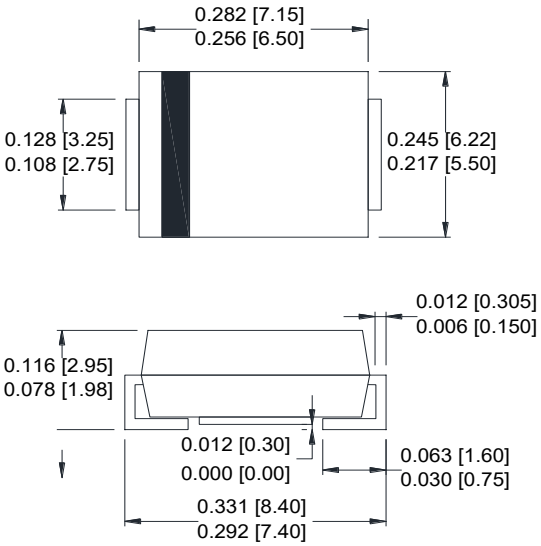
Working Voltage: 15V to 85V
Peak Pulse Power: 6600W

Automotive Protection Surface Mount Transient Voltage Suppressors

Features

- Glass passivated chip
- 6600W peak pulse power capability with a 10/1000 μs waveform, repetitive rate (duty cycle):0.01 %
- High reliability application and automotive grade AEC Q101 qualified
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- Very fast response time
- RoHS compliant
- Meets MSL level 1
- IEC 61000-4-2 (ESD) ±30kV (air), ±30kV (contact)

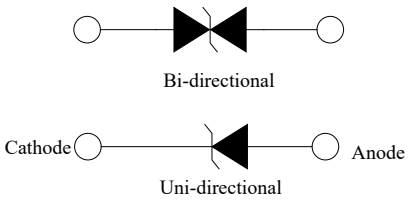
SMC/ DO-214AB



Dimensions : inch [mm]

Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any



Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000μs waveform(1)	P_{PP}	6600	W
Peak pulse current with a 10/1000μs waveform(1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at T_L = 50 °C	P_D	6.5	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only(2)	I_{FSM}	500	A
Maximum instantaneous forward voltage at 100 A for unidirectional only(3)	V_F	3.5/5.0	V
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to +150	°C

Note:

(1)Non-repetitive current pulse per Fig.6 and derated above T_A= 25 °C per Fig.3

(2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

(3)V_F<3.5V for devices of V_{BR}<200V and V_F<5.0V for devices of V_{BR}>201V

Ratings and Characteristics Curves (T_A=25℃ unless otherwise noted)

Fig.1 Peak Pulse Power Rating Cure

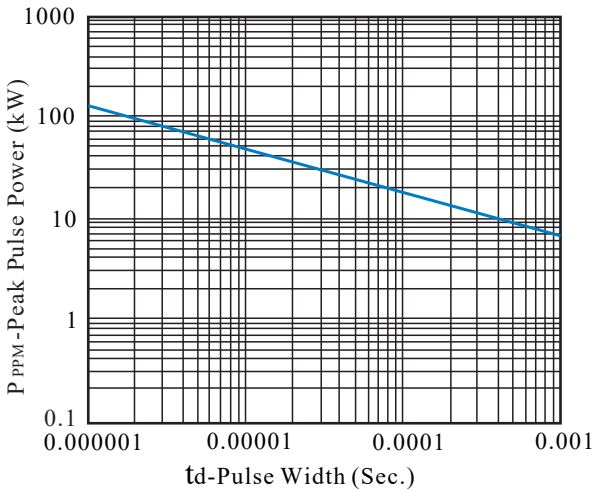


Fig.2 Typical Junction Capacitance

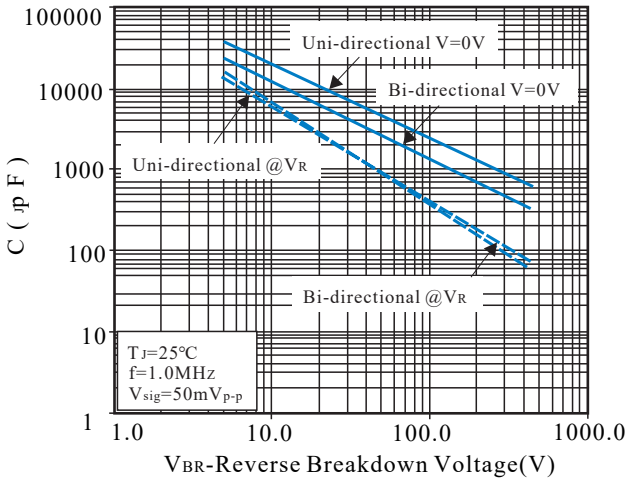


Fig.3 Pulse Waveform

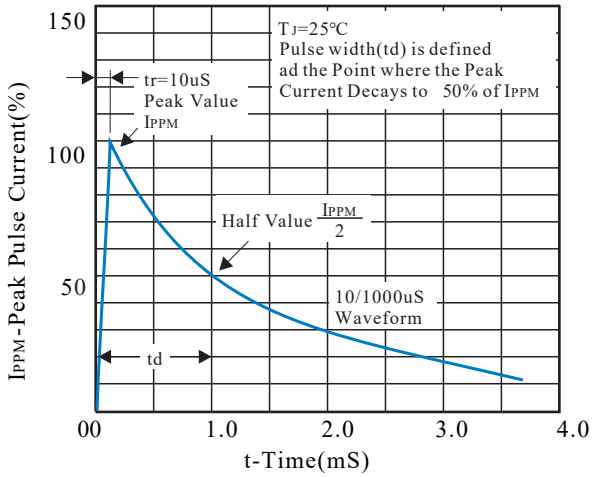


Fig.4 Maximum Non-repetitive Forward Surge

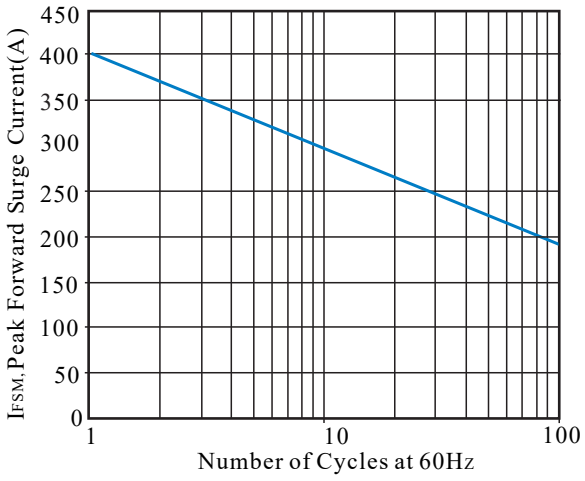


Fig.5 Ri-Vs chart for ISO-16750-2 Test A : 12V System

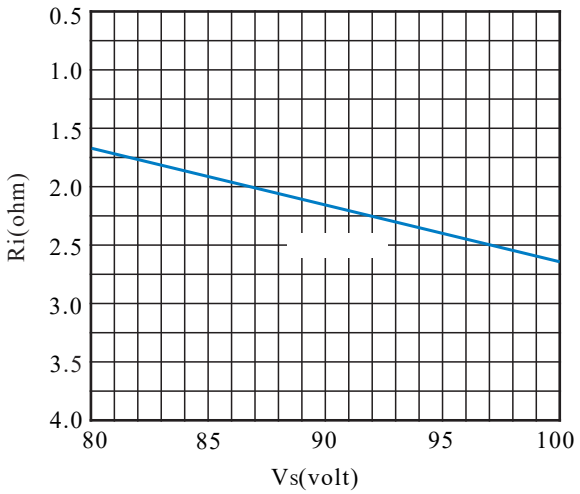
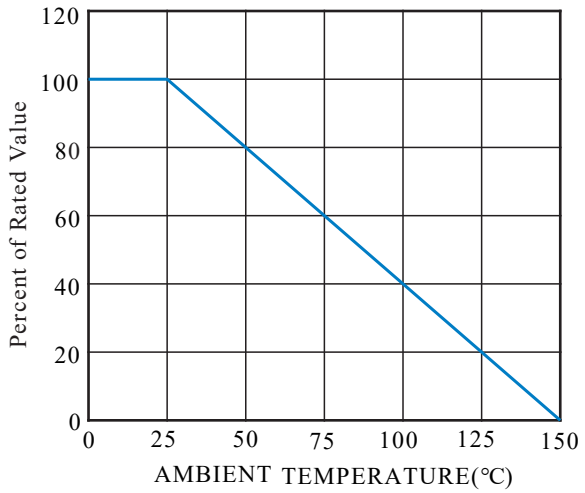


Fig.6 Power Derating Cure



Electrical Characteristics (T_A=25℃ unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Device Marking Code		Breakdown Voltage V_{BR} @I_T			Maximum Reverse Leakage I_R @V_{RWM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage V_C @I_{PP} (V)
		Uni	Bi	Min (V)	Max (V)	I_T (mA)				
TP6.6SMDJ15A	TP6.6SMDJ15CA	6PEKA	6BEKA	16.7	18.5	1	100	15	270.4	24.4
TP6.6SMDJ16A	TP6.6SMDJ16CA	6PEMA	6BEMA	17.8	19.7	1	50	16	253.8	26.0
TP6.6SMDJ17A	TP6.6SMDJ17CA	6PEPA	6BEPA	18.9	20.9	1	50	17	239.1	27.6
TP6.6SMDJ18A	TP6.6SMDJ18CA	6PERA	6BERA	20.0	22.1	1	50	18	226.0	29.2
TP6.6SMDJ20A	TP6.6SMDJ20CA	6PEVA	6BEVA	22.2	24.5	1	10	20	203.7	32.4
TP6.6SMDJ22A	TP6.6SMDJ22CA	6PEXA	6BEXA	24.4	26.9	1	2	22	185.9	35.5
TP6.6SMDJ24A	TP6.6SMDJ24CA	6PEZA	6BEZA	26.7	29.5	1	2	24	169.7	38.9
TP6.6SMDJ26A	TP6.6SMDJ26CA	6PFEA	6BFEA	28.9	31.9	1	2	26	156.8	42.1
TP6.6SMDJ28A	TP6.6SMDJ28CA	6PFGA	6BFGA	31.1	34.4	1	2	28	145.4	45.4
TP6.6SMDJ30A	TP6.6SMDJ30CA	6PFKA	6BFKA	33.3	36.8	1	2	30	136.4	48.4
TP6.6SMDJ33A	TP6.6SMDJ33CA	6PFMA	6BFMA	36.7	40.6	1	2	33	123.8	53.3
TP6.6SMDJ36A	TP6.6SMDJ36CA	6PFPA	6BFPA	40.0	44.2	1	2	36	113.6	58.1
TP6.6SMDJ40A	TP6.6SMDJ40CA	6PFRA	6BFRA	44.4	49.1	1	2	40	102.3	64.5
TP6.6SMDJ43A	TP6.6SMDJ43CA	6PFTA	6BFTA	47.8	52.8	1	2	43	95.1	69.4
TP6.6SMDJ45A	TP6.6SMDJ45CA	6PFVA	6BFVA	50.0	55.3	1	2	45	90.8	72.7
TP6.6SMDJ48A	TP6.6SMDJ48CA	6PFXA	6BFXA	53.3	58.9	1	2	48	85.3	77.4
TP6.6SMDJ51A	TP6.6SMDJ51CA	6PFZA	6BFZA	56.7	62.7	1	2	51	80.1	82.4
TP6.6SMDJ54A	TP6.6SMDJ54CA	6PGEA	6BGEA	60.0	66.3	1	2	54	75.8	87.1
TP6.6SMDJ58A	TP6.6SMDJ58CA	6PGGA	6BGGA	64.4	71.2	1	2	58	70.5	93.6
TP6.6SMDJ60A	TP6.6SMDJ60CA	6PGKA	6BGKA	66.7	73.7	1	2	60	68.2	96.8
TP6.6SMDJ64A	TP6.6SMDJ64CA	6PGMA	6BGMA	71.1	78.6	1	2	64	64.1	103.0
TP6.6SMDJ70A	TP6.6SMDJ70CA	6PGPA	6BGPA	77.8	86.0	1	2	70	58.4	113.0
TP6.6SMDJ75A	TP6.6SMDJ75CA	6PGRA	6BGRA	83.3	92.1	1	2	75	54.5	121.0
TP6.6SMDJ78A	TP6.6SMDJ78CA	6PGTA	6BGTA	86.7	95.8	1	2	78	52.3	126.0
TP6.6SMDJ80A	TP6.6SMDJ80CA	6PGBA	6BGBA	88.8	97.6	1	2	80	51.1	129.6
TP6.6SMDJ85A	TP6.6SMDJ85CA	6PGVA	6BGVA	94.4	104.0	1	2	85	48.2	137.0

Note:

1. Suffix 'A ' denotes 5% tolerance device.
2. Add suffix ' CA ' after part number to specify Bi-directional devices.
3. For Bi-Directional devices having V_R of 10 volts and under, the I_R limit is double.