PHY

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

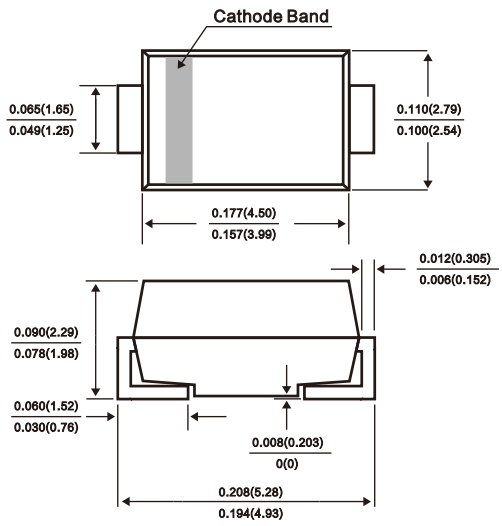
SM4T6V8A THRU **SM4T220A**

6.8V-**22**0V 400W

FEATURES

- For surface mounted applications in order to optimize board space
- Glass passivated junction
- Built-in strain relief
- Excellent clamping capability
- Low profile package
- Low inductance
- Excellent clamping capability
- Fast response time: typically less than 1.0 ps from 0 volts to BV min
- Typical I_R less than 1μA above 10V
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

SMA(DO-214AC)



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: JEDEC DO-214AC Molded plastic
Terminal : Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denoted positive end (cathode) except Bipolar
Standard Packaging: 12mm tape(EIA STD RS-481)
Weight: 0.002 ounces, 0.061 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation at T_A = 25 °C, T_P = 1ms (Note 1)	P_{PPM}	Minimum 400	Watts
Peak Pulse Current of on 10/1000 μs waveform (Note 1)	I_{PPM}	SEE TABLE 1	Amps
Steady State Power Dissipation at T_L = 75°C Lead lengths .375", 9.5mm (Note 2)	$P_{M(AV)}$	1.0	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load, (JEDEC Method)(Note 3)	I_{FSM}	40	Amps
Operatings and Storage Temperature Range	T_J, T_{STG}	-55 +150	°C

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above Ta=25 °C per Fig.2.
2. Mounted on 5.0mm² (0.03mm thick) Copper Pads to each termina
3. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle=4 pulses per minutes maximum.

SM4T PART NUMBER			MARKING CODE		REVERSE STAND-OFF VOLTAGE V_{RWM}(V)	BREAKDOWN VOLTAGE V_{BR}(V) MIN.@I_T	BREAKDOWN VOLTAGE V_{BR}(V) MAX.@I_T	TEST CURRENT I_T (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc(V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ VRWM IR(μA)
			UNI-POLAR	BI-POLAR							
SM4T	6.8A	6.8CA	AE	WE	5.80	6.45	7.14	10	10.5	39.0	1000
SM4T	7.5A	7.5CA	AK	WK	6.40	7.13	7.88	10	11.3	36.3	500
SM4T	10A	10CA	AT	WT	8.55	9.50	10.50	1	14.5	28.3	10
SM4T	12A	12CA	AX	WX	10.20	11.40	12.60	1	16.7	24.6	5
SM4T	15A	15CA	BG	XG	12.80	14.30	15.80	1	21.2	19.3	5
SM4T	18A	18CA	BP	XP	15.30	17.10	18.90	1	25.5	16.1	5
SM4T	22A	22CA	BT	XT	18.80	20.90	23.10	1	30.6	13.4	5
SM4T	24A	24CA	BV	XV	20.50	22.80	25.20	1	33.2	12.3	5
SM4T	27A	27CA	BZ	XZ	23.10	25.70	28.40	1	37.5	10.9	5
SM4T	30A	30CA	CE	YE	25.60	28.50	31.50	1	41.4	9.9	5
SM4T	33A	33CA	CG	YG	28.20	31.40	34.70	1	45.7	9.0	5
SM4T	36A	36CA	CK	YK	30.80	34.20	37.80	1	49.9	8.2	5
SM4T	39A	39CA	CM	YM	33.30	37.10	41.00	1	53.9	7.6	5
SM4T	68A	68CA	RG	ZG	58.10	64.60	71.40	1	92.0	4.5	5
SM4T	100A	100CA	RV	ZV	85.50	95.00	105.00	1	137.0	3.0	5
SM4T	150A	150CA	VG	VG	128.00	143.00	158.00	1	207.0	2.0	5
SM4T	200A	200CA	SR	VR	171.00	190.00	210.00	1	274.0	1.5	5
SM4T	220A	220CA	SS	VS	185.00	209.00	231.00	1	328.0	1.3	5

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.

The available parts are "A" type only, the parts without A (VBR is ± 10%) are not available.

Fig. 1 - Peak Pulse Power Rating Curve

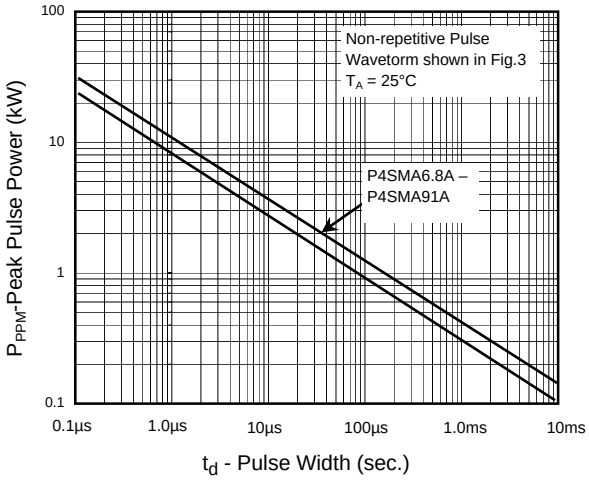


Fig.2 - Pulse Derating Curve

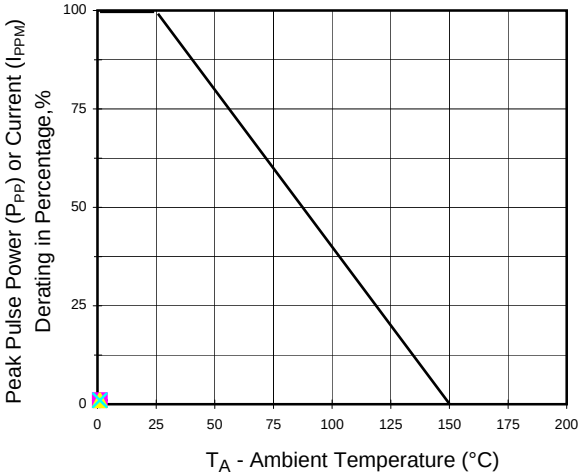


Fig.3 - Pulse Waveform

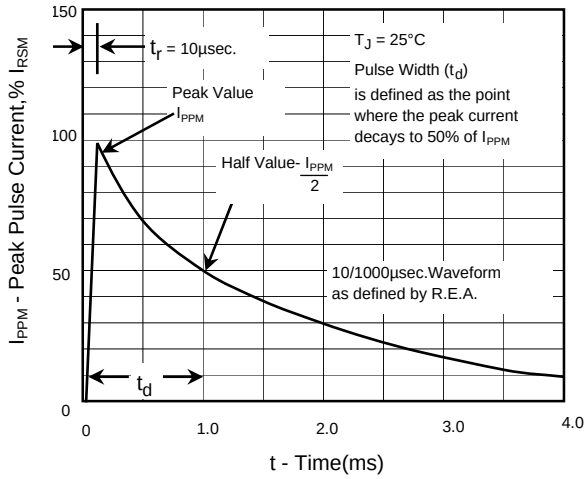


Fig.4 - Typical Junction Capacitance

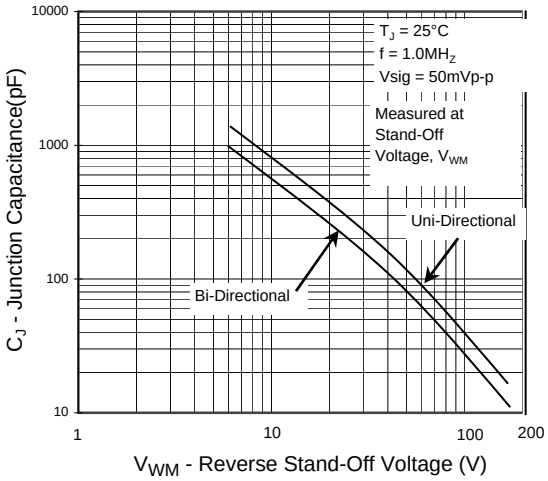


Fig. 5 - Typ.Transient Thermal Impedance

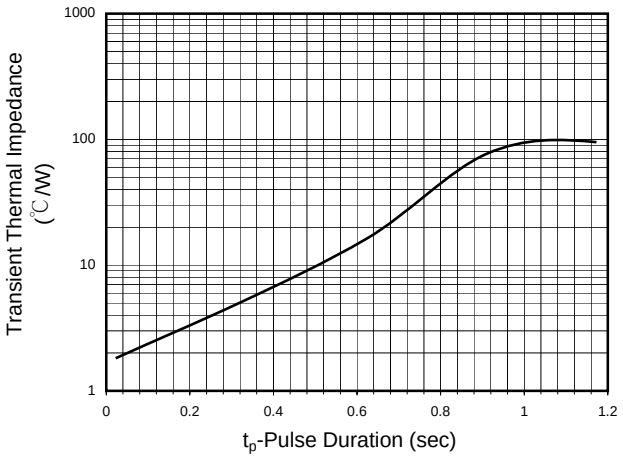


Fig.6 - Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Only