



E480232

Features

- Fully Automotive Qualified to AEC-Q101
- For Surface Mount Applications
- Excellent Clamping Capability
- High Temp Soldering: 260°C / 10 Seconds at Terminals
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- ESD protection of data lines in accordance with IEC 61000-4-2, ±30kV(Air), ±30kV (Contact)

Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power Surge Current with a 10/1000µs Waveform (Note 3)	I_{PPM}	See Next Table	A
Peak Pulse Power Dissipation (Note 3)	P_{PPM}	600	W
Power Dissipation on Infinite Heatsink at $T_L = 85^\circ\text{C}$	P_D	3.0	W
Peak Forward Surge Current Unidirectional Only (Note 4)	I_{FSM}	60	A

Note:

- Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
- Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig.4.
- 8.3ms, single half sine wave duty cycle = 4 pulses per Minutes maximum.

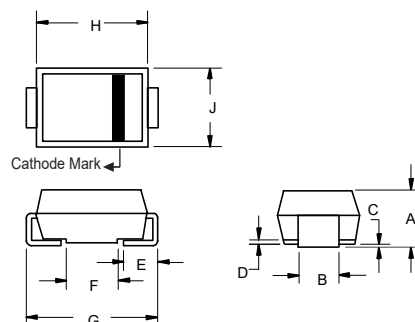
Internal Structure

Description	Simplified outline	Graphic symbol
Uni-directional		
Bi-directional		

XXXX = Marking code YYWW = Date Code

600Watt TVS
10 to 100
Volts

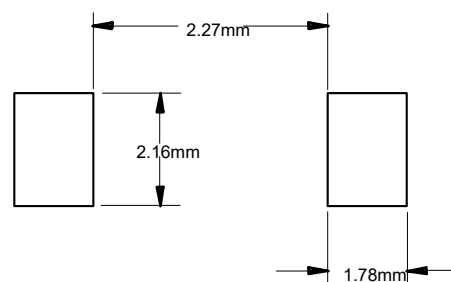
SMA (DO-214AC) LEAD FRAME



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.075	0.096	1.90	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

SUGGESTED SOLDER PAD LAYOUT



Thermal Characteristics

Parameter	Symbol	Value	Unit
Operating Junction Temperature Range	T_J	-55 to +175	°C
Storage Temperature Range	T_{STG}	-55 to +175	°C
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	30	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	120	°C/W
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	50	°C/W

Note:

5. Mounted on 0.2 x 0.2" (5.0 x 5.0 mm) copper pads to each terminal.

Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number		Working Peak Reverse Voltage	Breakdown Voltage V_{BR} @ I_T			Maximum Clamping Voltage @ I_{PP}	Maximum Reverse Surge Current	Maximum Reverse Leakage @ V_{RWM}	Device Marking Code	
(Uni)	(Bi)	$V_{RWM}(V)$	Min (V)	Max (V)	$I_T (mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$	Uni	Bi
SMA6J10AQ	SMA6J10CAQ	10	11.1	12.3	1	17.0	35.3	5	KX	TX
SMA6J11AQ	SMA6J11CAQ	11	12.2	13.5	1	18.2	33.0	5	KZ	TZ
SMA6J12AQ	SMA6J12CAQ	12	13.3	14.7	1	19.9	30.2	5	LE	UE
SMA6J13AQ	SMA6J13CAQ	13	14.4	15.9	1	21.5	27.9	1	LG	UG
SMA6J14AQ	SMA6J14CAQ	14	15.6	17.2	1	23.2	25.9	1	LK	UK
SMA6J15AQ	SMA6J15CAQ	15	16.7	18.5	1	24.4	24.6	1	LM	UM
SMA6J16AQ	SMA6J16CAQ	16	17.8	19.7	1	26.0	23.1	1	LP	UP
SMA6J17AQ	SMA6J17CAQ	17	18.9	20.9	1	27.6	21.7	1	LR	UR
SMA6J18AQ	SMA6J18CAQ	18	20.0	22.1	1	29.2	20.6	1	LT	UT
SMA6J19AQ	SMA6J19CAQ	19	22.1	23.3	1	30.8	19.5	1	LU	UU
SMA6J20AQ	SMA6J20CAQ	20	22.2	24.5	1	32.4	18.5	1	LV	UV
SMA6J22AQ	/	22	24.4	26.9	1	35.5	16.9	1	LX	/
SMA6J24AQ	/	24	26.7	29.5	1	38.9	15.4	1	LZ	/
SMA6J26AQ	/	26	28.9	31.9	1	42.1	14.3	1	ME	/
SMA6J28AQ	/	28	31.1	34.4	1	45.4	13.2	1	MG	/
SMA6J30AQ	/	30	33.3	36.8	1	48.4	12.4	1	MK	/
SMA6J33AQ	/	33	36.7	40.6	1	53.3	11.3	1	MM	/
SMA6J36AQ	/	36	40.0	44.2	1	58.1	10.3	1	MP	/
SMA6J40AQ	/	40	44.4	49.1	1	64.5	9.3	1	MR	/
SMA6J43AQ	/	43	47.8	52.8	1	69.4	8.7	1	MT	/
SMA6J45AQ	/	45	50.0	55.3	1	72.7	8.3	1	MV	/
SMA6J48AQ	/	48	53.3	58.9	1	77.4	7.8	1	MX	/
SMA6J51AQ	/	51	56.7	62.7	1	82.4	7.3	1	MZ	/
SMA6J54AQ	/	54	60.0	66.3	1	87.1	6.9	1	NE	/
SMA6J58AQ	/	58	64.4	71.2	1	93.6	6.4	1	NG	/
SMA6J60AQ	/	60	66.7	73.7	1	96.8	6.2	1	NK	/
SMA6J64AQ	/	64	71.1	78.6	1	103.0	5.8	1	NM	/
SMA6J70AQ	/	70	77.8	86.0	1	113.0	5.3	1	NP	/
SMA6J75AQ	/	75	83.3	92.1	1	121.0	5.0	1	NR	/
SMA6J78AQ	/	78	86.7	95.8	1	126.0	4.8	1	NT	/
SMA6J80AQ	/	80	88.8	97.6	1	129.6	4.6	1	NV	/
SMA6J85AQ	/	85	94.4	104.0	1	137.0	4.4	1	NX	/
SMA6J90AQ	/	90	100.0	111.0	1	146.0	4.1	1	NZ	/
SMA6J100AQ	/	100	111.0	123.0	1	162.0	3.7	1	OE	/

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

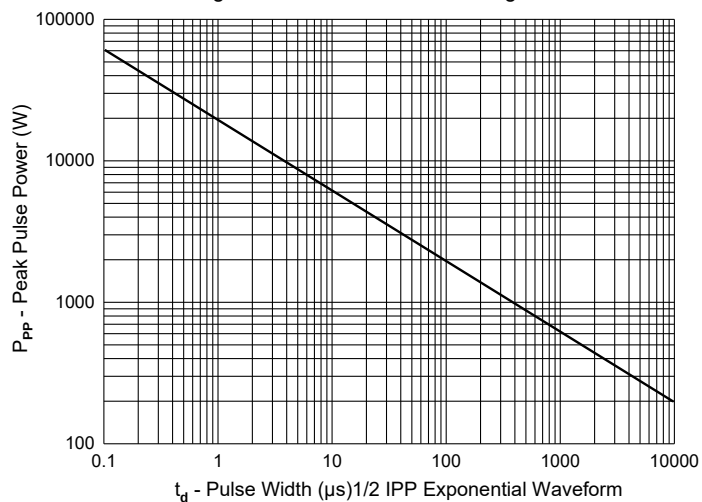


Fig. 2 - Typical Junction Capacitance

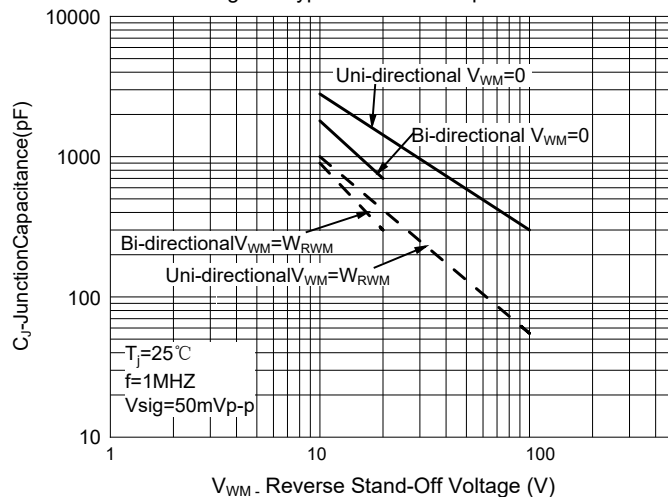


Fig. 3 - Pulse Waveform

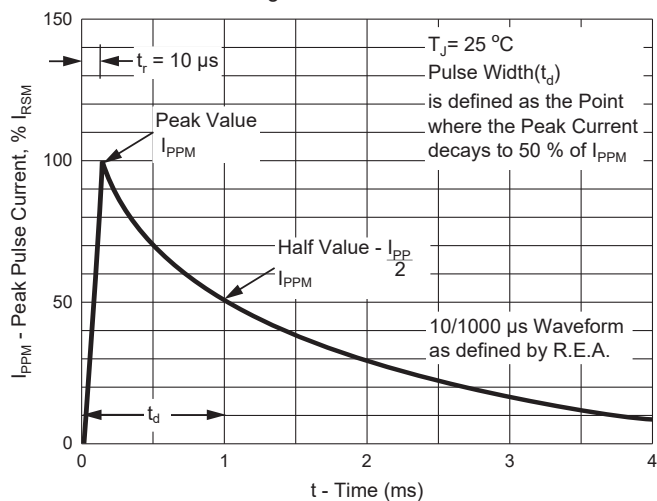
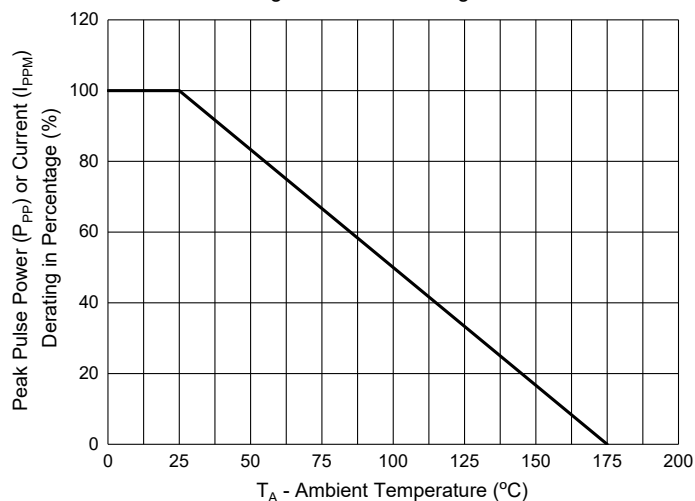


Fig. 4 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:5Kpcs/Reel

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