



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Micro Commercial Components



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# SMA6J5.0A THRU SMA6J33A

## Features

- For Surface Mount Applications
- Unidirectional And Bidirectional
- High Surge Capability
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- For Bidirectional Devices Add "C" To The Suffix of The Part Number: i.e.SMA6J9.0CA for 5% Tolerance
- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"

## Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Polarity: Indicated by cathode band except bi-directional types

## Maximum Rating:

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C
- Typical Thermal Resistance: 33°C/W Junction to Ambient

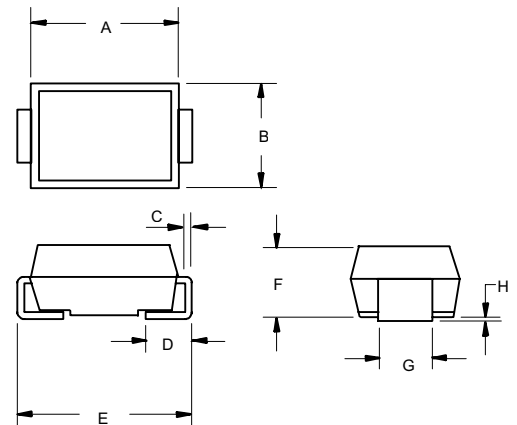
Peak Pulse Current on 10/1000µs Waveform	I <sub>PPM</sub>	See Table 1	Note 2
Peak Pulse Power Dissipation	P <sub>PPM</sub>	Min 600 W	Note 2, 6
Steady State Power Dissipation	P <sub>M(AV)</sub>	3.0 W	Note 5
Peak Forward Surge Current	I <sub>FSM</sub>	70A	Note:5

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

2. Non-repetitive current pulse, per Fig.4 and derated above T<sub>A</sub>=25°C per Fig.1.
3. Mounted on 5.0mm<sup>2</sup> copper pads to each terminal.
4. 8.3ms, single half sine wave duty cycle = 4 pulses per Minutes maximum.
5. Lead temperature at T<sub>L</sub> = 75°C.
6. Peak pulse power waveform is 10/1000µs.

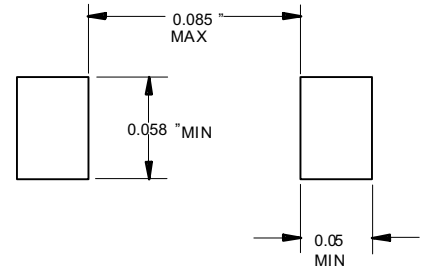
**600 Watt  
 Transient Voltage  
 Suppressors  
 5.0 to 33 Volts**

## DO-214AC (SMA)(LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.157	.181	4.00	4.60	
B	.098	.114	2.50	2.90	
C	.006	.012	0.152	0.305	
D	.030	.060	0.76	1.52	
E	.188	.208	4.80	5.28	
F	.078	.096	2.00	2.44	
G	.055	.062	1.40	1.60	
H	.002	.008	0.051	0.203	

### SUGGESTED SOLDER PAD LAYOUT



SMA6J5.0A thru SMA6J33A

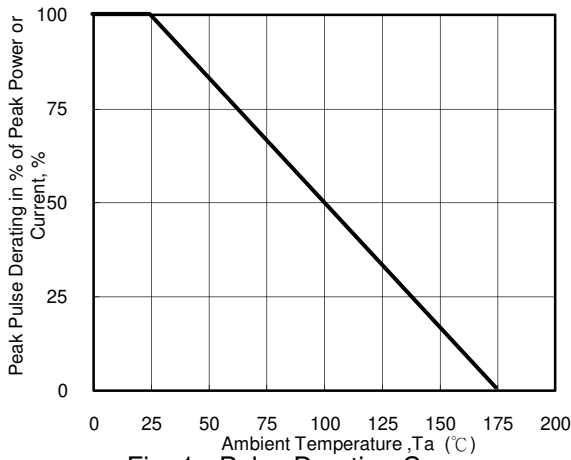


Fig. 1 - Pulse Derating Curve

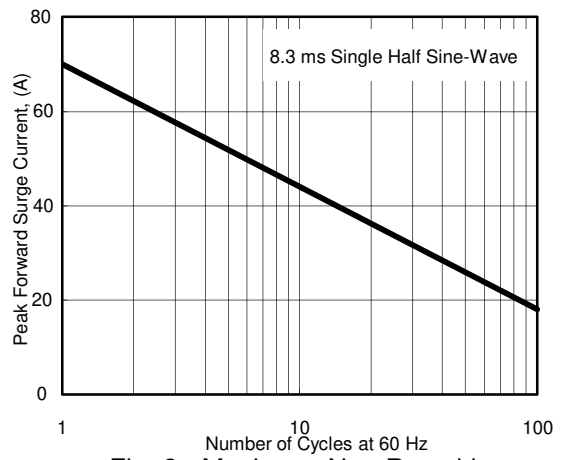


Fig. 2 - Maximum Non-Repetitive Surge Current

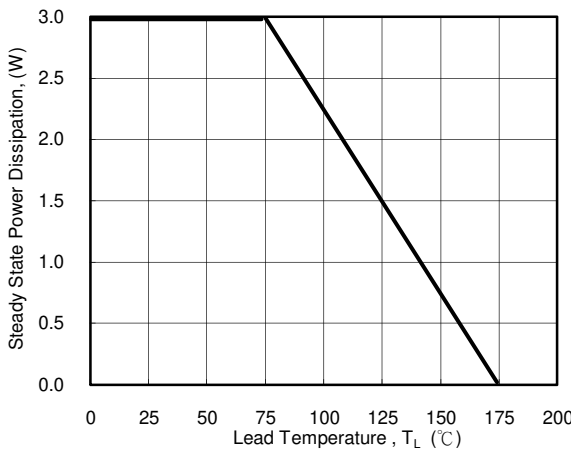


Fig. 3 - Steady State Power Derating Curve

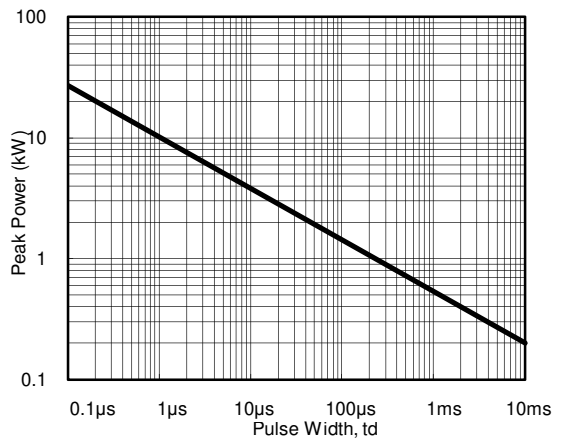


Fig. 4 - Peak Pulse Power Rating Curve

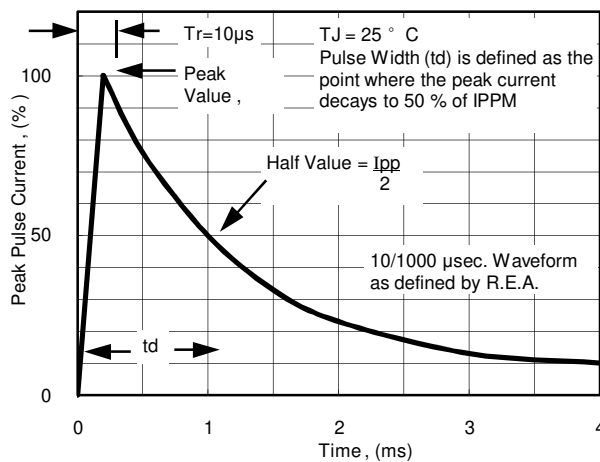


Fig. 5 - Pulse Waveform



# SMA6J5.0A thru SMA6J33A

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MCC Part Number		Breakdown Voltage $V_{BR}$ @ $I_T$			Maximum Reverse Leakage $I_D$ ( $\mu$ A) @VWM	Reverse Stand-Off Voltage $V_{WM}$ (Volts)	Maximum Reverse Surge Current $I_{pp}$ (A) @10x1000us sinewave	Maximum Clamping Voltage $V_c$ (Volts) @ $I_{pp}$	Device Marking Code	
		Min. (V)	Max. (V)	$I_T$ (mA)					Uni	Bi
Uni-polar	Bi-polar									
<a href="#">SMA6J5.0A</a>		6.40	7.00	10	800	5.0	65.2	9.2	KE	
<a href="#">SMA6J6.0A</a>		6.67	7.37	10	800	6.0	58.3	10.3	KG	
SMA6J9.0A	SMA6J9.0CA	10.0	11.1	1	5.0	9.0	39.0	15.4	KV	TV
SMA6J10A	SMA6J10CA	11.1	12.3	1	5.0	10	35.3	17.0	KX	TX
SMA6J11A	SMA6J11CA	12.2	13.5	1	5.0	11	33.0	18.2	KZ	TZ
SMA6J12A	SMA6J12CA	13.3	14.7	1	5.0	12	30.2	19.9	LE	UE
SMA6J13A	SMA6J13CA	14.4	15.9	1	5.0	13	27.9	21.5	LG	UG
SMA6J14A	SMA6J14CA	15.6	17.2	1	5.0	14	25.9	23.2	LK	UK
SMA6J15A	SMA6J15CA	16.7	18.5	1	5.0	15	24.6	24.4	LM	UM
SMA6J16A	SMA6J16CA	17.8	19.7	1	5.0	16	23.1	26.0	LP	UP
SMA6J17A	SMA6J17CA	18.9	20.9	1	5.0	17	21.7	27.6	LR	UR
SMA6J18A		20.0	22.1	1	5.0	18	20.5	29.2	LT	
SMA6J19A		21.1	23.3	1	5.0	19	19.5	30.8	LB	
SMA6J20A		22.2	24.5	1	5.0	20	18.5	32.4	LV	
SMA6J22A		24.4	26.9	1	5.0	22	16.9	35.5	LX	
SMA6J24A	<a href="#">SMA6J24CA</a>	26.7	29.5	1	5.0	24	15.4	38.9	LZ	UZ
SMA6J26A		28.9	31.9	1	5.0	26	14.3	42.1	ME	
	<a href="#">SMA6J28CA</a>	31.1	34.4	1	5.0	28	13.2	45.4		WG
<a href="#">SMA6J33A</a>		36.7	40.6	1	5.0	33	11.3	53.3	MM	

Note:

1. For Bi-Directional devices having VR of 10 volts and under, the IR limit is double .
2. The items in blue character are still under development.



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### Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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