



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

Micro Commercial Components
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**TSMBJ1006C
 THRU
 TSMBJ1024C**

**Transient Voltage
 Protection Device
 75 to 320 Volts**

Features

- Oxide-Glass passivated Junction
- Bi-Directional protection in a single device
- Surge capabilities up to 100A@10/1000us or 400A@8/20us
- High Off-State impedance and Low On-State voltage
- Plastic material has UL flammability classification 94V-0

Mechanical Data

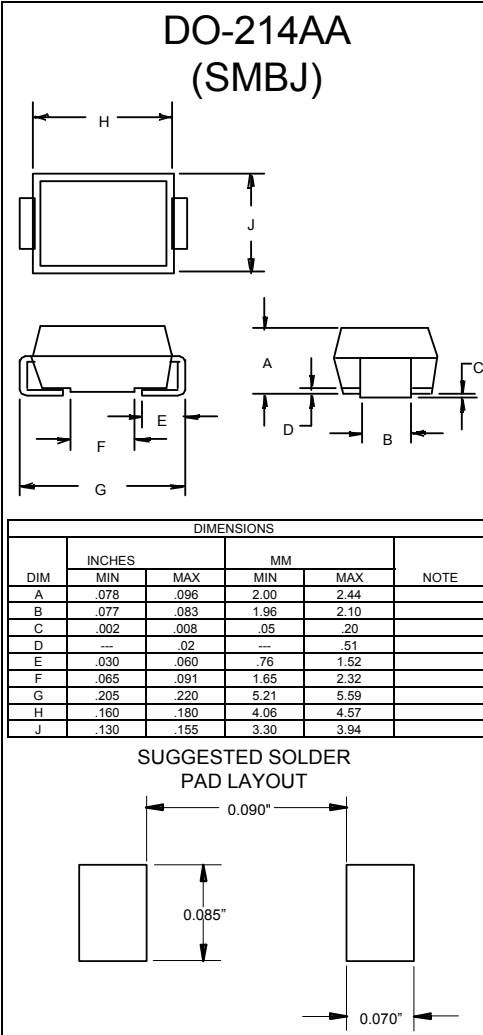
- Case : Molded plastic
- Polarity : None cathode band denotes
- Approx Weight : 0.093grams

Maximum Rating

Characteristic	Symbol	Value	Unit
Non-repetitive peak impulse current	I_{PP}	100A	10/1000us
Non-repetitive peak On-state current	I_{TSM}	50A	8.3ms, one-half cycle
Operating temperature range	T_{OP}	-40~150°C	
Junction and storage temperature range	T_J, T_{STG}	-55~150°C	

Thermal Resistance

Characteristic	Symbol	Value	Unit
Thermal Resistance junction to lead	$R_{\theta JL}$	20°C/W	
Thermal Resistance junction to ambient	$R_{\theta JA}$	100°C/W	On recommended pad layout
Typical positive temperature coefficient for breakdown voltage	$\Delta V_{BR}/\Delta T_J$	0.1%/°C	



TSMBJ1006C thru TSMBJ1024C



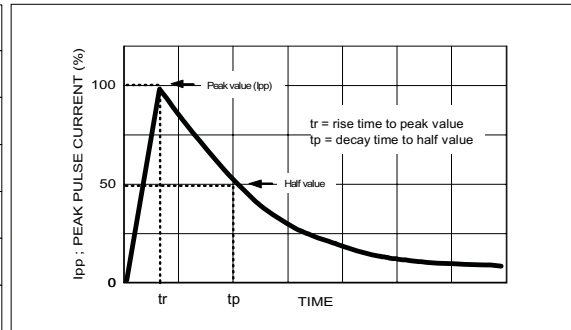
Micro Commercial Components

ELECTRICAL CHARACTERISTIC @25°C Unless otherwise specified

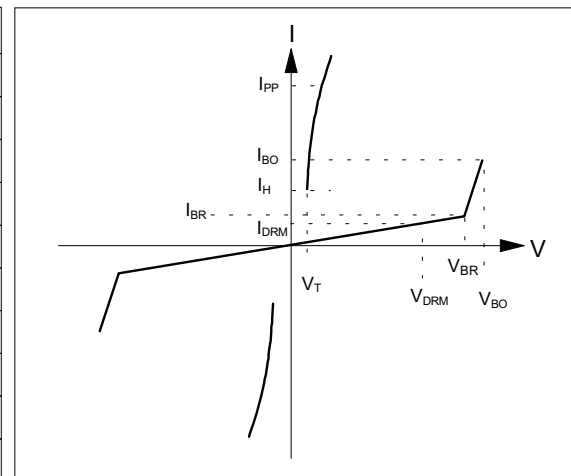
Parameter	Rated Repetitive Off-state Voltage	Off-state Leakage Current@V _{DRM}	Breakover Voltage	On-State Voltage @I _T =1.0A	Breakover Current	Holding Current	Off-State
Symbol	V _{DRM}	I _{DRM}	V _{BO}	V _T	I _{BO+}	I _H	C _J
Units	Volts	uA	Volts	Volts	mA	mA	pF
Limit	Max	Max	Max	Max	Max	Min	Typ.
TSMBJ1006C	75	5	98	5	800	150	200
TSMBJ1007C	90	5	130	5	800	150	120
TSMBJ1010C	140	5	180	5	800	150	120
TSMBJ1012C	160	5	220	5	800	150	120
TSMBJ1016C	190	5	265	5	800	150	80
TSMBJ1018C	220	5	300	5	800	150	80
TSMBJ1022C	275	5	350	5	800	150	80
TSMBJ1024C	320	5	400	5	800	150	80

MAXIMUM RATED SURGE WAVEFORM

Waveform	Standard	I _{pp} (A)
2/10 us	GR-1089-CORE	500
8/20 us	IEC 61000-4-5	400
10/160 us	FCC Part 68	200
10/700 us	ITU-T K20/21	200
10/560 us	FCC Part 68	150
10/1000 us	GR-1089-CORE	100



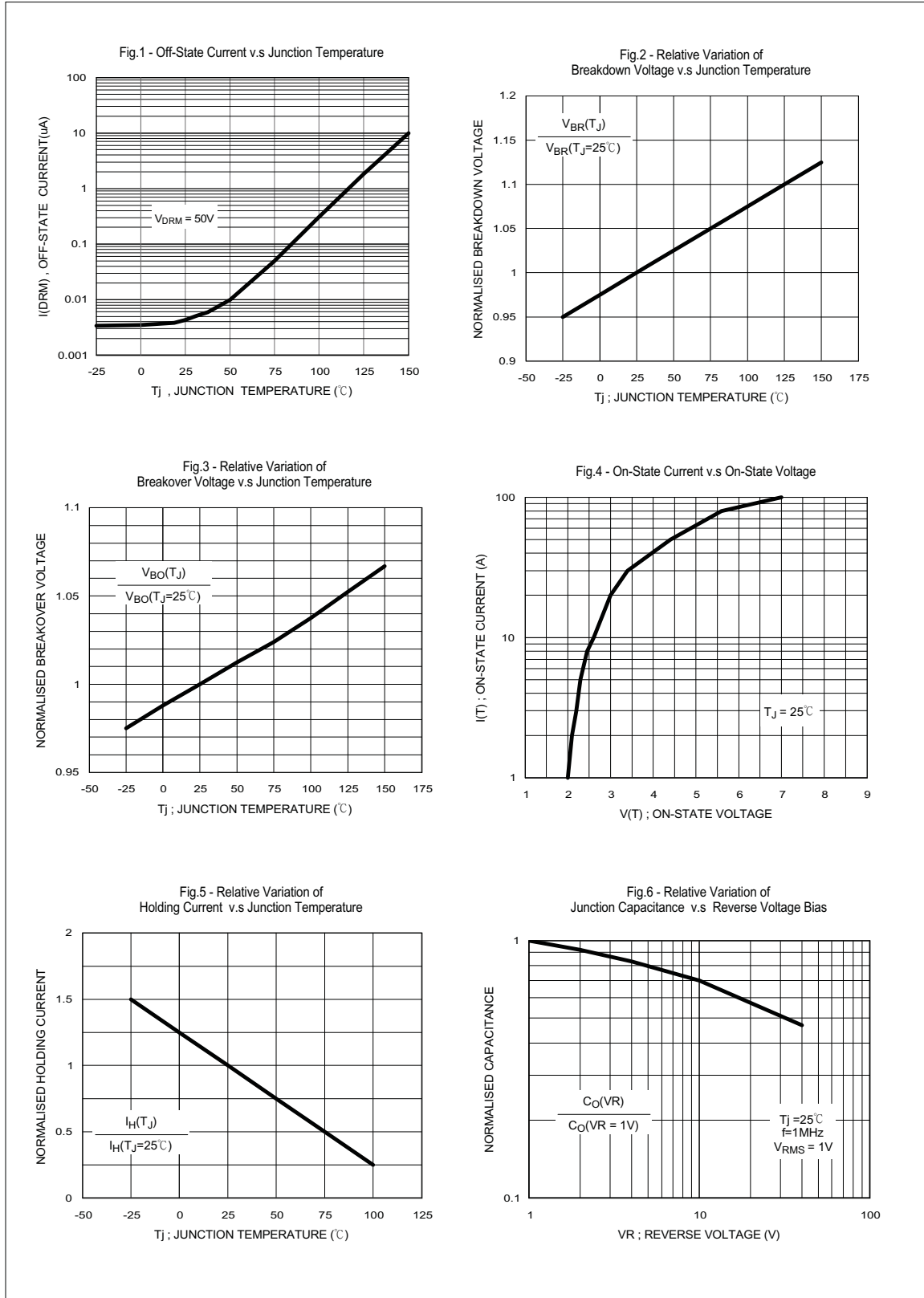
Symbol	Parameter	
V _{DRM}	Stand-off voltage	
I _{DRM}	Leakage current at stand-off voltage	
V _{BR}	Breakdown voltage	
I _{BR}	Breakdown current	
V _{BO}	Breakover voltage	
I _{BO}	Breakover current	
I _H	Holding current	NOTE: 1
V _T	On state voltage	
I _{PP}	Peak pulse current	
C _O	Off-state capacitance	NOTE: 2



NOTE :

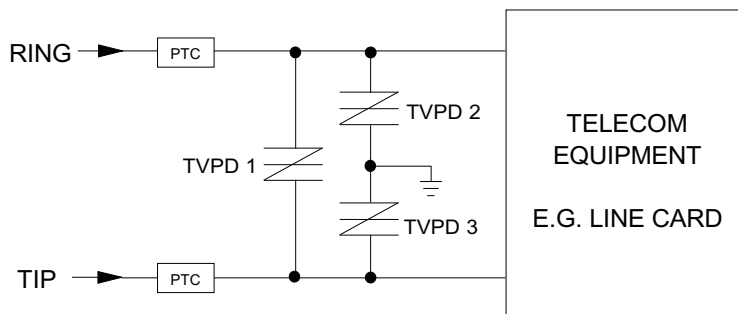
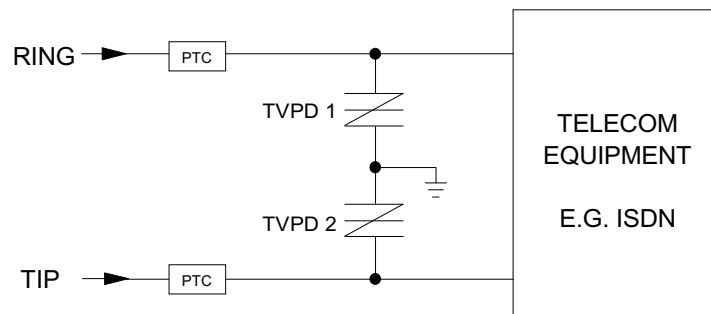
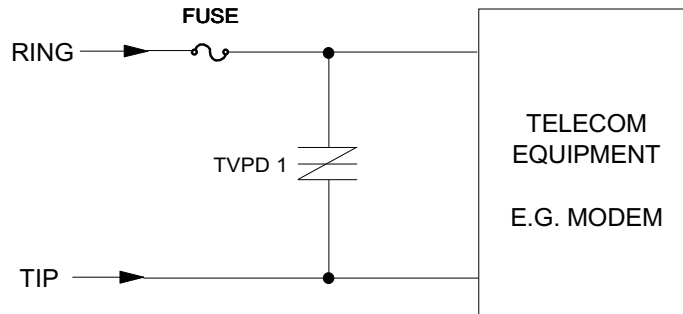
1. $I_H > (V_L / R_L)$ If this criterion is not obeyed, the TSPD triggers but does not return correctly to high-resistance state. The surge recovery time. It does not exceed 30ms.
2. Off-state capacitance measured at $f=1.0\text{MHz}$, 1.0Vrms signal, $V_R=2\text{Vdc}$ bias.

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TYPICAL APPLICATION CIRCUITS



The PTC (Positive Temperature Coefficient) is an overcurrent protection device.

MARKING CODE

