



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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**TSMBJ0306C
 THRU
 TSMBJ0324C**

Features

- Oxide-Glass passivated Junction
- Bi-Directional protection in a single device
- Surge capabilities up to 50A@10/1000us or 150A@8/20us
- High Off-State impedance and Low On-State voltage
- Plastic material has UL flammability classification 94V-0

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

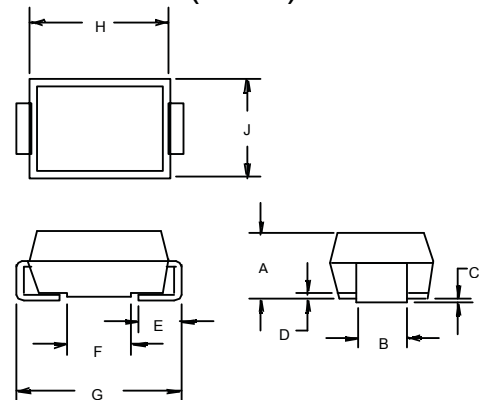
Mechanical Data

- 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}	50A	10/1000us
Non-repetitive peak On-state current	I_{TSM}	20A	8.3ms, one-half cycle
Operating temperature range	T_{OP}	-40~125°C	
Junction and storage temperature range	T_J, T_{STG}	-55~150°C	

**DO-214AA
 (SMB)**

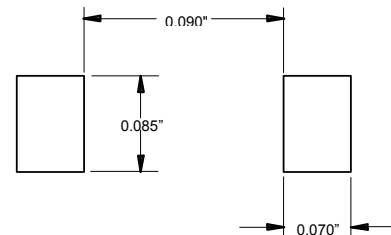


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.078	.096	2.00	2.44	
B	.077	.083	1.96	2.10	
C	.002	.008	.05	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.091	1.65	2.32	
G	.205	.220	5.21	5.59	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

Thermal Resistance

Characteristic	Symbol	Value	Unit
Thermal Resistance junction to lead	$R_{\theta JL}$	30°C/W	
Thermal Resistance junction to ambient	$R_{\theta JA}$	120°C/W	On recommended pad layout
Typical positive temperature coefficient for breakdown voltage	$\Delta V_{BR}/\Delta T_J$	0.1%/°C	

**SUGGESTED SOLDER
 PAD LAYOUT**



TSMBJ0306C thru TSMBJ0324C



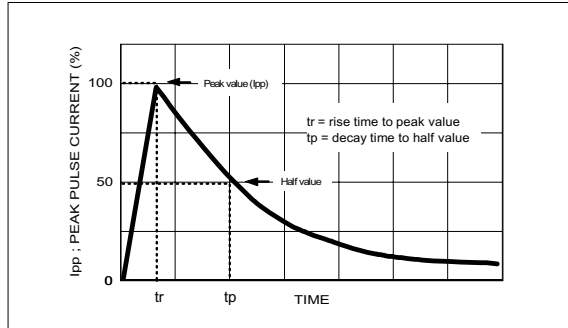
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ELECTRICAL CHARACTERISTIC @25°C Unless otherwise specified

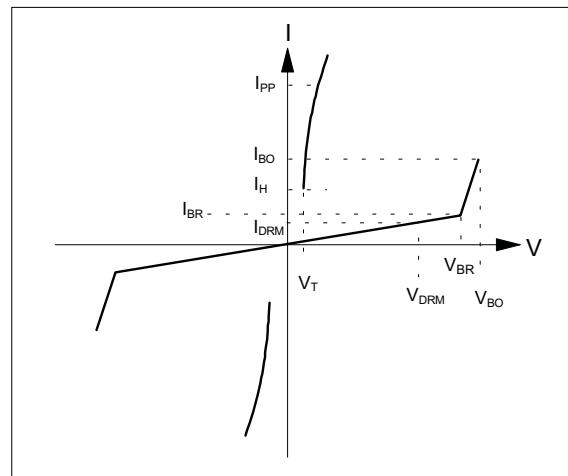
Parameter	Rated Repetitive Off-state Voltage	Off-state Leakage Current@ V_{DRM}	Breakover Voltage	On-State Voltage @ $I_T=1.0A$	Breakover Current	Holding Current	Off-State Capacitance
Symbol	V_{DRM}	I_{DRM}	V_{BO}	V_T	I_{BO+}	I_H	C_J
Units	Volts	μA	Volts	Volts	mA	mA	pF
Limit	Max	Max	Max	Max	Max	Min	Typ.
TSMBJ0306C	75	5	98	5	800	150	100
TSMBJ0307C	90	5	130	5	800	150	60
TSMBJ0310C	140	5	180	5	800	150	60
TSMBJ0312C	160	5	220	5	800	150	60
TSMBJ0316C	190	5	265	5	800	150	40
TSMBJ0318C	220	5	300	5	800	150	40
TSMBJ0322C	275	5	350	5	800	150	40
TSMBJ0324C	320	5	400	5	800	150	40

MAXIMUM RATED SURGE WAVEFORM

Waveform	Standard	Ipp (A)
2/10 us	GR-1089-CORE	200
8/20 us	IEC 61000-4-5	150
10/160 us	FCC Part 68	100
10/700 us	ITU-T K20/21	60
10/560 us	FCC Part 68	60
10/1000 us	GR-1089-CORE	50



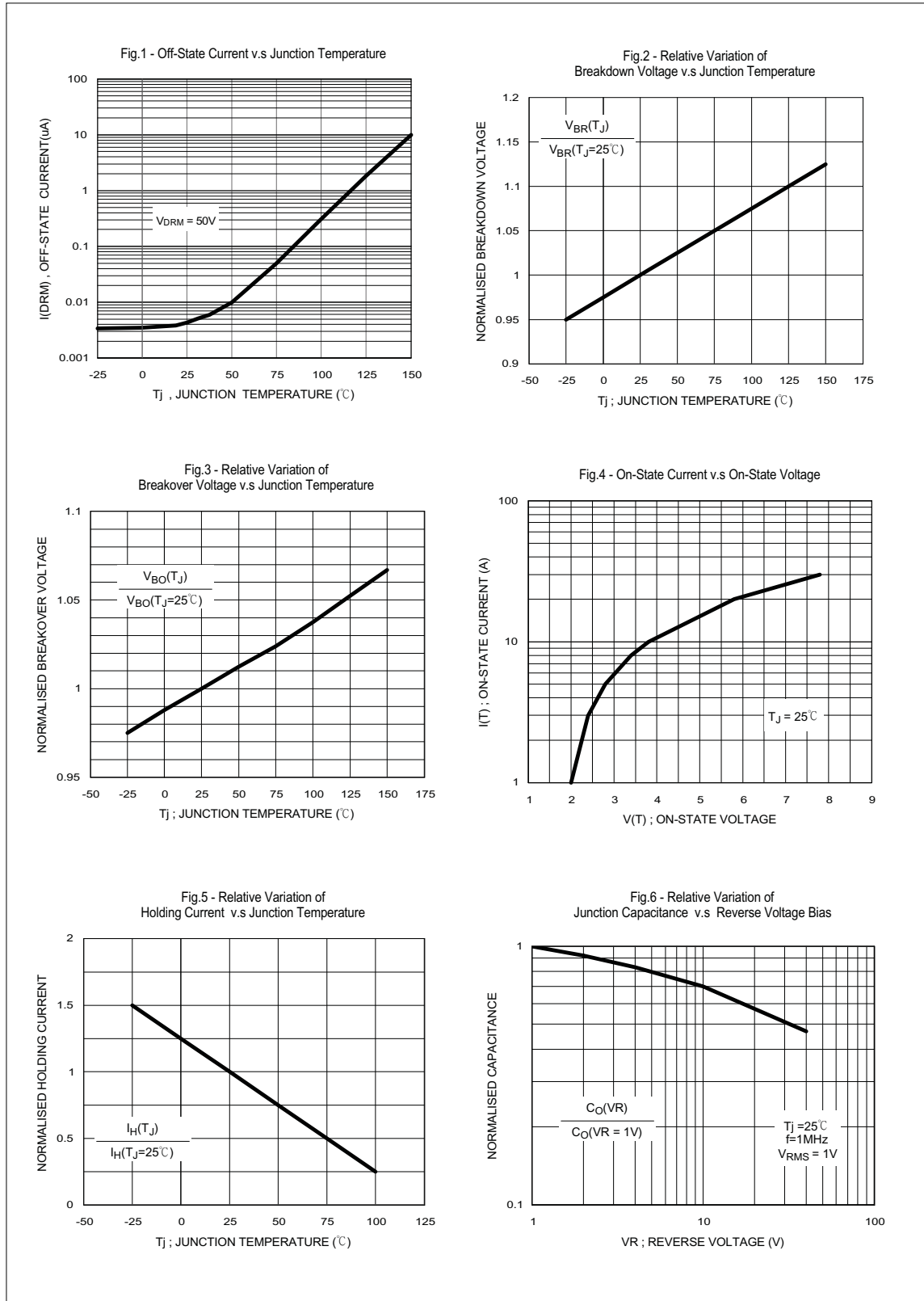
Symbol	Parameter	
V_{DRM}	Stand-off voltage	
I_{DRM}	Leakage current at stand-off voltage	
V_{BR}	Breakdown voltage	
I_{BR}	Breakdown current	
V_{BO}	Breakover voltage	
I_{BO}	Breakover current	
I_H	Holding current	NOTE: 1
V_T	On state voltage	
I_{PP}	Peak pulse current	
C_O	Off-state capacitance	NOTE: 2



NOTE :

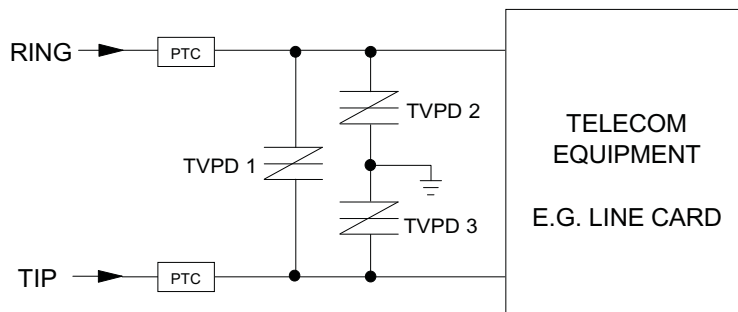
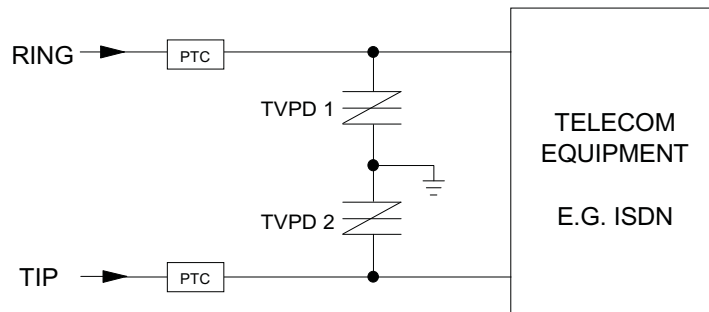
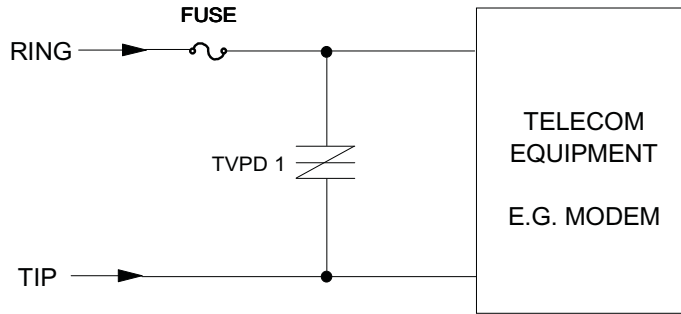
- $I_H > (V_L / R_L)$ If this criterion is not obeyed, the TSPD triggers but does not return correctly to high-resistance state. The surge recovery time. It does not exceed 30ms.
- Off-state capacitance measured at $f=1.0MHz$, $1.0V_{rms}$ signal, $V_R=2V_{dc}$ bias.

TSMBJ0306C thru TSMBJ0324C



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TYPICAL APPLICATION CIRCUITS



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

MARKING CODE

