

Micro Commercial Components Corp.

Products End of Life Notification

Issue date: Oct-20th-2008

Last Buy Date : Dec-31th-2008

Description and Purpose:

MCC has undergone a review of its core business and products , and

determined to discontinue below products:

Discontinued Devices	Possible Replacements
TSMBJ1024C	None
TSMBJ1022C	None
TSMBJ1018C	None
TSMBJ1016C	None
TSMBJ1012C	None
TSMBJ1010C	None
TSMBJ1009C-130	None
TSMBJ1007C	None
TSMBJ1006C	None
TSMBJ1005C-072	None
TSMBJ1005C-064	None
TSMBJ0524C	None
TSMBJ0522C	None
TSMBJ0518C	None
TSMBJ0516C	None
TSMBJ0512C	None
TSMBJ0510C	None
TSMBJ0509C-130	None

Discontinued Devices	Possible Replacements
TSMBJ0507C	None
TSMBJ0506C	None
TSMBJ0505C-072	None
TSMBJ0505C-064	None
TSMBJ0324C	None
TSMBJ0322C	None
TSMBJ0318C	None
TSMBJ0316C	None
TSMBJ0312C	None
TSMBJ0310C	None
TSMBJ0309C-130	None
TSMBJ0307C	None
TSMBJ0306C	None
TSMBJ0305C-072	None
TSMBJ0305C-064	None



Micro Commercial Components

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TSMBJ0506C THRU TSMBJ0524C

Features

- Oxide-Glass passivated Junction
- Bi-Directional protection in a single device
- Surge capabilities up to 80A@10/1000us or 250A@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

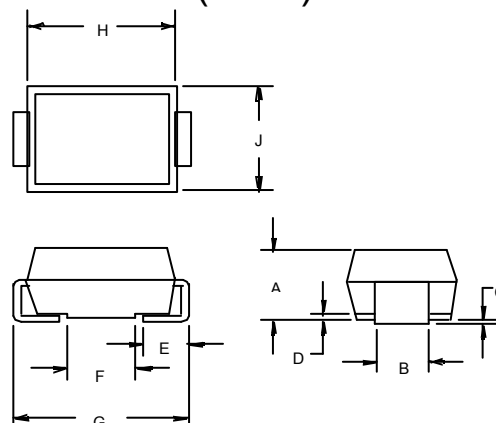
Characteristic	Symbol	Value	Unit
Non-repetitive peak impulse current	I_{PP}	80A	10/1000us
Non-repetitive peak On-state current	I_{TSM}	30A	8.3ms, one-half cycle
Operating temperature range	T_{OP}	-40~150°C	
Junction and storage temperature range	T_J, T_{STG}	-55~150°C	

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	

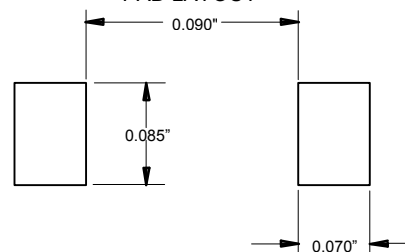
Transient Voltage Protection Device 75 to 320 Volts

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	

SUGGESTED SOLDER PAD LAYOUT



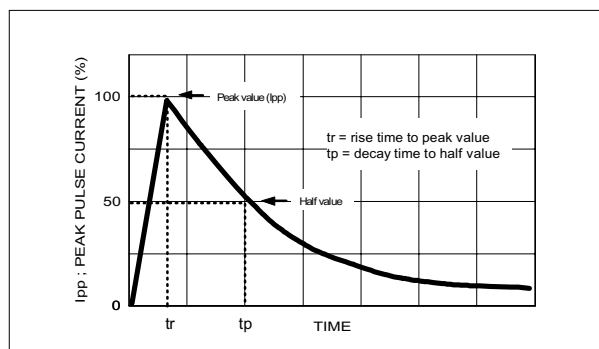
TSMBJ0506C thru TSMBJ0524C

ELECTRICAL CHARACTERISTIC @25°C Unless otherwise specified

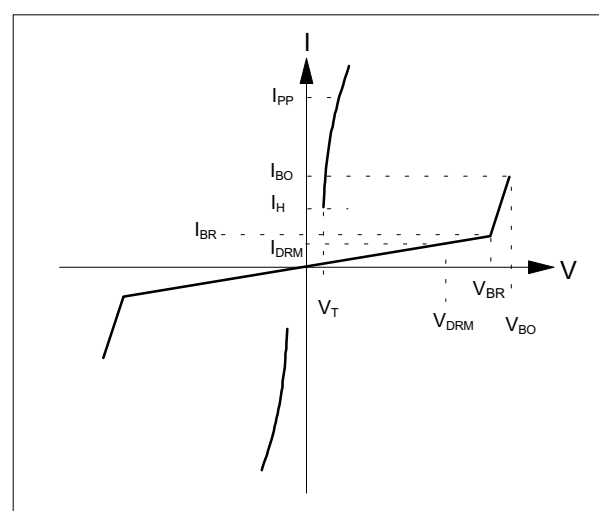
Parameter	Rated Repetitive Off-state Voltage	Off-state Leakage Current@ V_{DRM}	Breakover Voltage	On-State Voltage @ $I_T=1.0A$	Breakover Current	Holding Current	Off-State Capacitance
Symbol	V_{DRM}	I_{DRM}	V_{BO}	V_T	I_{BO+}	I_H	C_J
Units	Volts	μA	Volts	Volts	mA	mA	pF
Limit	Max	Max	Max	Max	Max	Min	Typ.
TSMBJ0506C	75	5	98	5	800	150	140
TSMBJ0507C	90	5	130	5	800	150	90
TSMBJ0510C	140	5	180	5	800	150	90
TSMBJ0512C	160	5	220	5	800	150	90
TSMBJ0516C	190	5	265	5	800	150	60
TSMBJ0518C	220	5	300	5	800	150	60
TSMBJ0522C	275	5	350	5	800	150	60
TSMBJ0524C	320	5	400	5	800	150	60

MAXIMUM RATED SURGE WAVEFORM

Waveform	Standard	Ipp (A)
2/10 us	GR-1089-CORE	250
8/20 us	IEC 61000-4-5	250
10/160 us	FCC Part 68	150
10/700 us	ITU-T K20/21	100
10/560 us	FCC Part 68	100
10/1000 us	GR-1089-CORE	80



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 $f=1.0MHz$, $1.0V_{rms}$ signal, $V_R=2V_{dc}$ bias.

TSMBJ0506C thru TSMBJ0524C

Fig.1 - Off-State Current v.s Junction Temperature

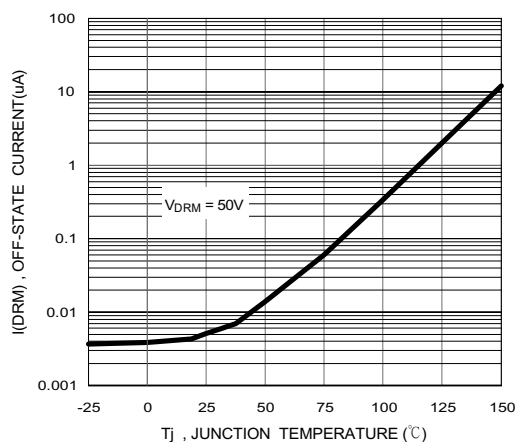


Fig.2 - Relative Variation of Breakdown Voltage v.s Junction Temperature

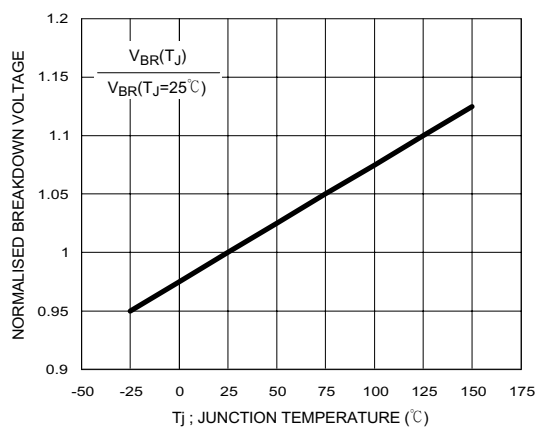


Fig.3 - Relative Variation of Breakover Voltage v.s Junction Temperature

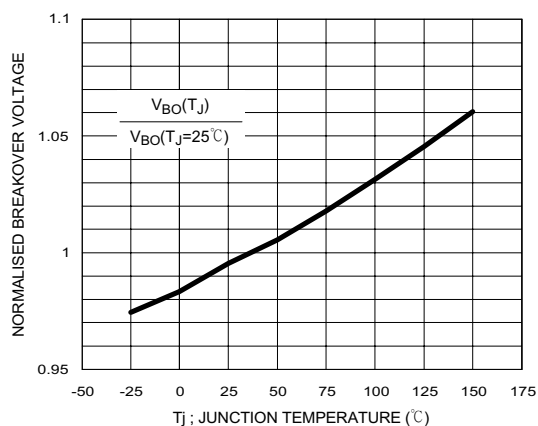


Fig.4 - On-State Current v.s On-State Voltage

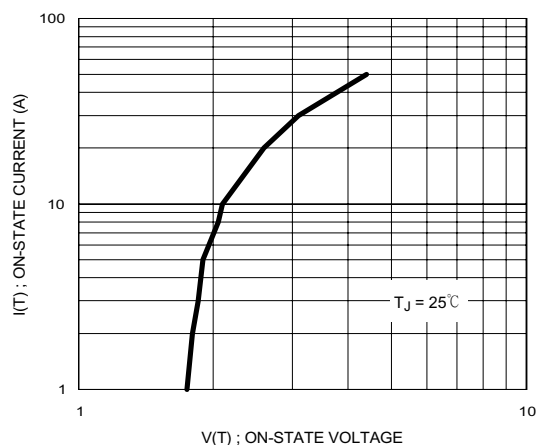


Fig.5 - Relative Variation of Holding Current v.s Junction Temperature

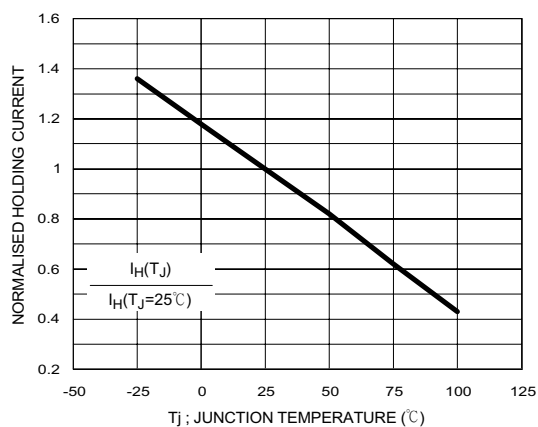
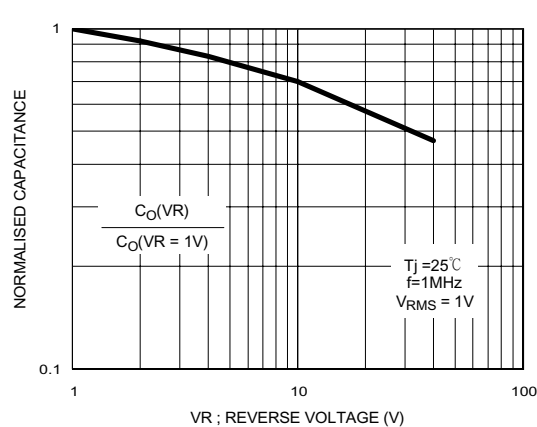
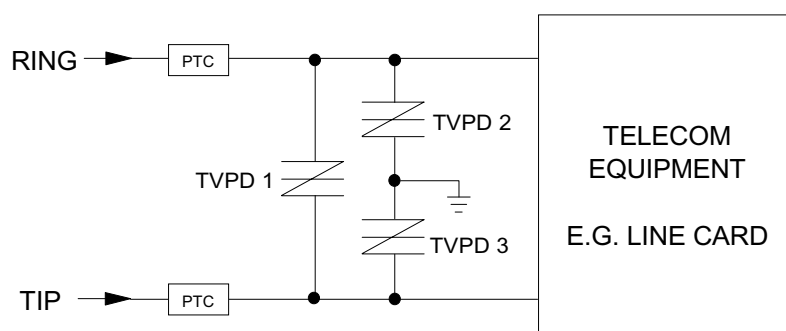
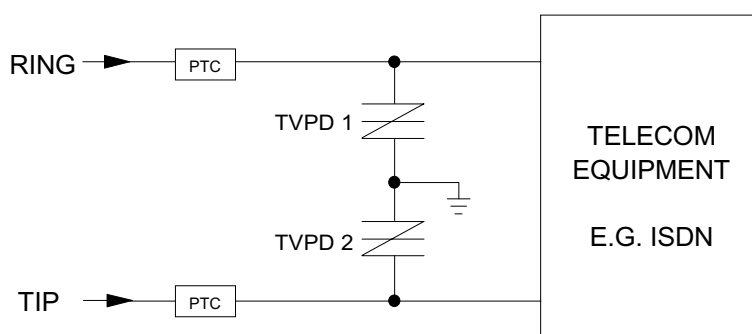
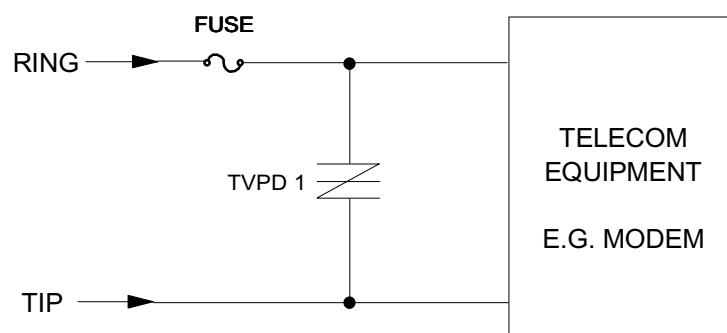


Fig.6 - Relative Variation of Junction Capacitance v.s Reverse Voltage Bias



TSMBJ0506C thru TSMBJ0524C

TYPICAL APPLICATION CIRCUITS



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

Mouser Electronics

Authorized Distributor

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[TSMBJ0512C/TP](#)