

## **Micro Commercial Components Corp.**

### **Products End of Life Notification**

**Issue date: Oct-20<sup>th</sup>-2008**

**Last Buy Date : Dec-31<sup>th</sup>-2008**

**Description and Purpose:**

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

**determined to discontinue below products:**

<b>Discontinued Devices</b>	<b>Possible Replacements</b>
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



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<b>Discontinued Devices</b>	<b>Possible Replacements</b>
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



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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

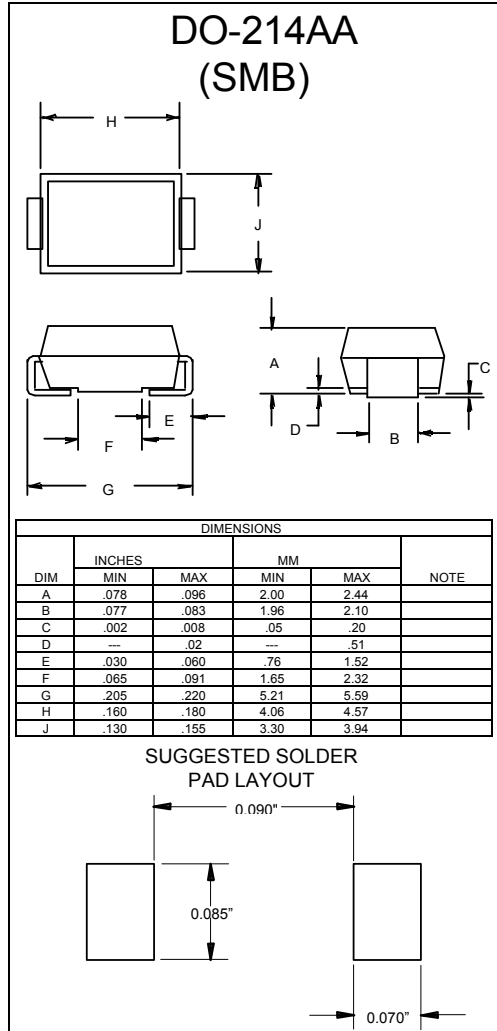
**Transient Voltage  
 Protection Device  
 75 to 320 Volts**

**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	$I_{PP}$	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	

# TSMBJ0506C thru TSMBJ0524C



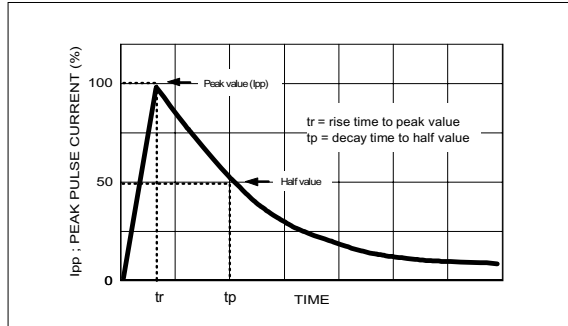
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ELECTRICAL CHARACTERISTIC @25°C Unless otherwise specified

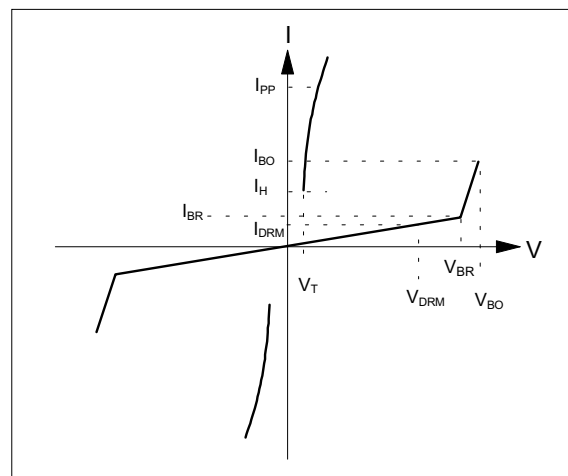
Parameter	Rated Repetitive Off-state Voltage	Off-state Leakage Current@ $V_{DRM}$	Breakover Voltage	On-State Voltage @ $I_T=1.0A$	Breakover Current	Holding Current	Off-State Capacitance
Symbol	$V_{DRM}$	$I_{DRM}$	$V_{BO}$	$V_T$	$I_{BO+}$	$I_H$	$C_J$
Units	Volts	$\mu A$	Volts	Volts	mA	mA	pF
Limit	Max	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 :

- $I_H > (V_L / R_L)$  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.

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

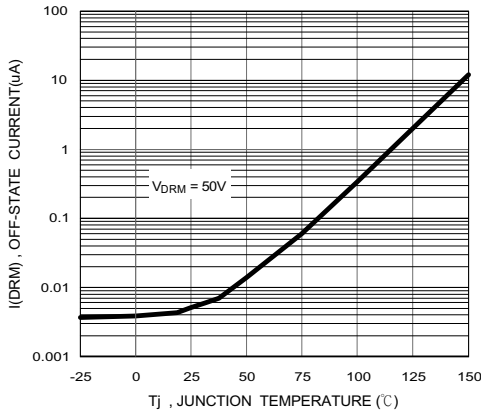


Fig.2 - Relative Variation of Breakdown Voltage v.s Junction Temperature

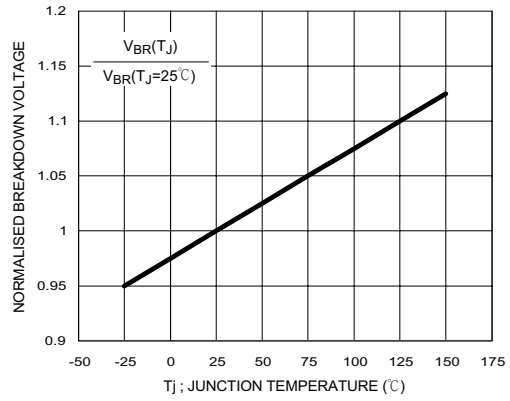


Fig.3 - Relative Variation of Breakover Voltage v.s Junction Temperature

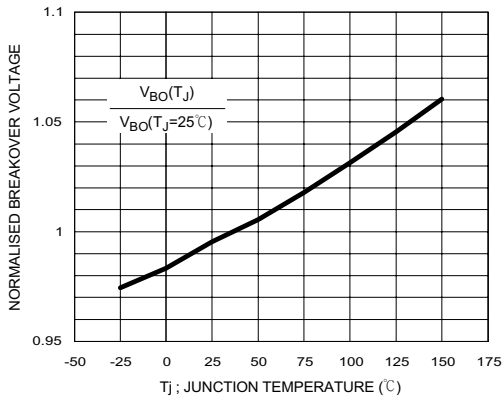


Fig.4 - On-State Current v.s On-State Voltage

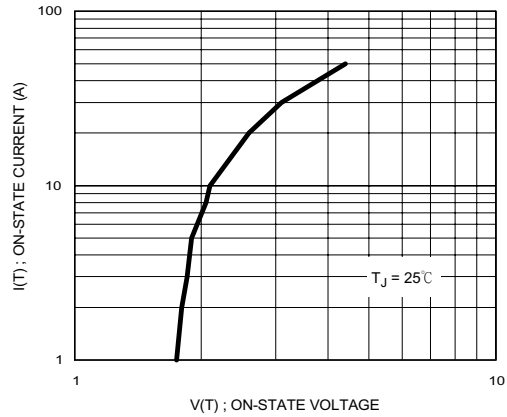


Fig.5 - Relative Variation of Holding Current v.s Junction Temperature

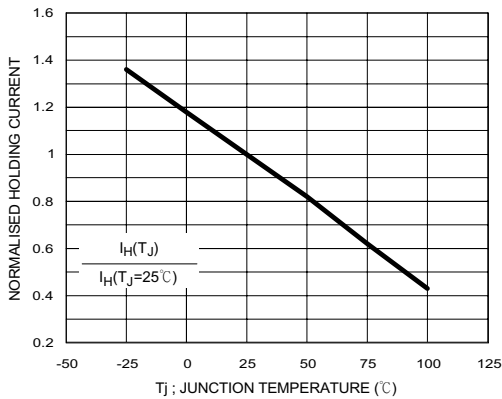
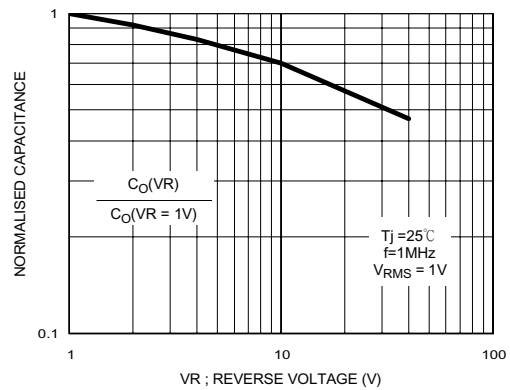
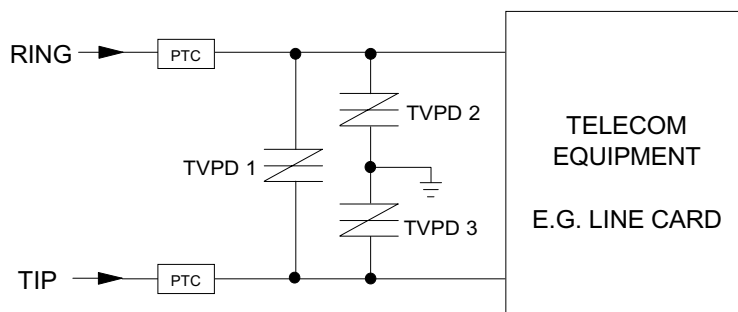
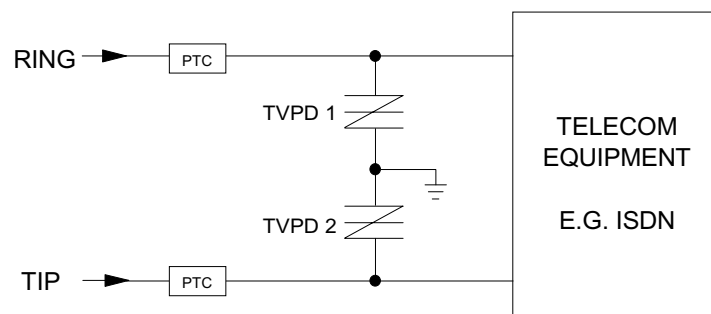
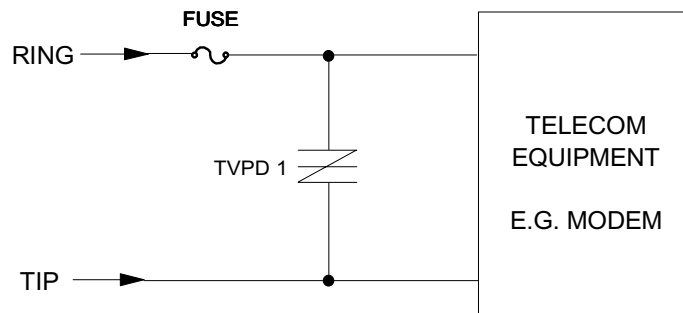


Fig.6 - Relative Variation of Junction Capacitance v.s Reverse Voltage Bias



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## TYPICAL APPLICATION CIRCUITS



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