



**TSMBJ1005C
 thru
 TSMBJ1027C**

Features

- Bidirectional Transient Voltage Protection
- Surge Capabilities up to 100 Amps @ 10/1000ms or 300 Amps @ 8/20µs (note 2, 5)
- Initial Breakdown Voltages from 60 to 335 Volts
- Positive Resistance Breakover Voltages from 100 to 440 Volts
- Clamping speeds of Nanoseconds
- Oxide-Glass Passivated Junctions
- High Off-State Impedance (low leakage) and Low On-State Voltage (crowbar action)
- Encapsulating material meets UL94VO Requirements
- UL497B Recognized/ UL File No. E152273
- ISO9001 Certified

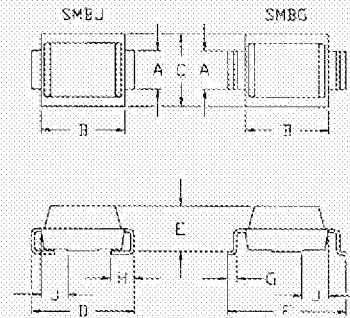
**Bi-Directional
 100 Amp
 50-270 Volts
 Thyristor Surge
 Protective Device
 (TSPD)**

Maximum Ratings

- Operating Temperature: -40°C to + 150°C (note 5)
- Storage Temperature: -65°C to + 150°C
- Repetitive Off-State Voltage (both directions): See Electrical Characteristics for V_{DRM}
- Non-Repetitive Peak Impulse Current (I_{PP}): 100 A @ 10/1000µs or 300 A @ 8/20µs (note 5)
- Non-Repetitive Peak On-State Current (I_{SM}) @ 8.3ms (one-half cycle); 50 Amps

**MECHANICAL
 CHARACTERISTICS**

CASE STYLE: SMBJ (DO-214AA)
 and SMBG (DO-215AA)



	INCHES MIN/MAX	MILLIMETERS MIN/MAX
A	0.77/0.83	1.96/2.10
B	.160/.180	4.06/4.57
C	.130/.155	3.30/3.94
D	.285/.226	5.21/5.39
E	.075/.095	1.91/2.41
F	.235/.255	5.97/6.48
G	.015/.030	0.38/0.76
H	.030/.060	0.76/1.52
J	.038/.058	0.97/1.47

ADDITIONAL PACKAGE STYLES:
 For other package styles contact Microsemi
 Scottsdale's TSPD Group for detail package
 dimensions.
LEAD FINISH: Solder Dip or Lead Tin Plate
POLARITY: Bi-directional

Electrical Characteristics @ 25°C Unless otherwise specified

Part Number (see note 6)	Rated Peak Pulse Current 100 Amps @ 10/1000ms	Rated Repetitive Off-State Voltage (see note 3) V _{DRM}	Off-State Leakage Current @ V _{DRM} I _{ORM}	Breakdown Voltage @ I _{BR} = 1mA (see note 4) V _{BR}	Breakover Voltage (see note 1) V _(BO)	On-State Voltage @ I _T = 1A (pulse) V _T	Holding Current		Capacitance (1 MHz)	
							I _H mA	I _h mA	C _o @0v pF	C _o @ 50V pF
		MAX.	MAX.	MIN.	MAX.	MAX.	MIN.	MAX.	MAX.	MAX.
TSMBJ1005C	50	50	5	60	100	3.5	150	750	200	100
TSMBJ1006C	60	60	5	70	110	3.5	150	750	200	100
TSMBJ1007C	70	70	5	85	145	3.5	150	750	200	100
TSMBJ1009C	90	90	5	115	185	3.5	150	750	200	100
TSMBJ1010C	100	100	5	125	200	3.5	150	750	200	100
TSMBJ1011C	110	110	5	135	210	3.5	150	750	200	100
TSMBJ1012C	120	120	5	150	215	3.5	150	750	200	100
TSMBJ1014C	140	140	5	175	250	3.5	150	750	200	100
TSMBJ1016C	160	160	5	190	265	3.5	150	750	200	100
TSMBJ1018C	180	180	5	220	300	3.5	150	750	200	100
TSMBJ1022C	220	220	5	275	350	3.5	150	750	200	100
TSMBJ1024C	240	240	5	300	400	3.5	150	750	200	100
TSMBJ1027C	270	270	5	335	440	3.5	150	750	200	100

Consult factory for additional voltage and holding current tolerance options.

NOTES:

1. For rise times less than 1 kV/ms. For very fast times up to 1kV/ms, V_(BO) will be 110% of V_(BO) Max.. The Max. I_(BO) is 750mA.
2. Critical rate of rise of On-State current is 100A/ms Max.
3. Maximum rate of rise of Off-State voltage V_{DRM} that will not trigger device is 5kV/ms (T_J = 70°C).
4. Breakdown voltage V_{BR} has a positive temperature coefficient of + 0.1%/°C
5. Above 70°C, derate linearly to zero @ 150°C lead temperature.
6. For different packages or die options replace part number prefix as follows:
 "TSMBJ" for surface mount DO-214AA with J-bend (as shown)
 "TSMBG" for surface mount DO-215AA with Gull Wing
 "TSH" for DO-13 hermetic axial lead metal package
 "TSF" for T-18 axial lead plastic
 "TSEP" for Case 1 axial, 0.040" diameter leads
 "TSES" for Case 2 axial, 0.030" diameter leads
 "TCD" for cellular die package
 "TCH" for chip equivalent in hybrid applications

Contact Microsemi Scottsdale's TSPD Group for detail package dimensions.