



**TSMBJ10L05C
 and
 TSMBJ10L12C**

Features

- Bidirectional Transient Voltage Protection
- Surge Capabilities up to 100 Amps @ 10/1000µs or 300 Amps @ 8/20µs (note 2, 5)
- Positive Resistance Breakover Voltages
- 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
- ISO 9001 Certified

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_{PPS}): 100 A @ 10/1000µs or 300 A @ 8/20µs (note 5)
- Non-Repetitive Peak On-State Current (I_{TSM}) @ 8.3ms (one-half cycle): 50 Amps

Electrical Characteristics @ 25°C

Rated Peak Impulse Current 100 Amps @ 10/1000ms	Rated Repetitive Off-State Voltage (Note 3)	Off-State Leakage Current @ V_{DRM}	Breakdown Voltage @ $I_{BR} = 1mA$ (Note 4)	Breakover Voltage (Note 1)	On-State Voltage @ $I_T = 1A$ (pulsed)	Holding Current	Capacitance (1MHz)
Part Numbers (Note 6)	V_{DRM} Volts	I_{DRM} mA	$V_{(BR)}$ Volts	$V_{(BO)}$ Volts	V_T Volts	I_H mA	C_o @ 0v pF
	MAX.	MAX.	MIN.	MAX.	MAX.	MIN.	MAX.
TSMBJ10L05C	5	1	8	12.5	3.0	20	50
TSMBJ10L12C	12	1	18.5	25	3.0	20	50

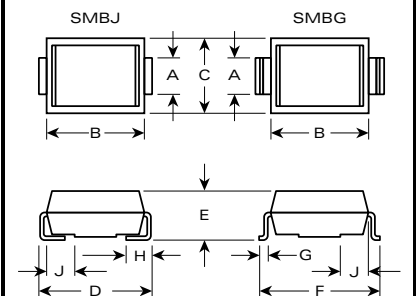
Consult factory for additional voltage and holding current tolerance options.

Notes:

- For rise times less than 1 kV/ms. For very fast rise times up to 1 kV/µs, $V_{(BO)}$ will be 110% of $V_{(BO)}$ Max., The Max. $I_{(BO)}$ is 750mA.
- Critical rate of rise of on-state current is 100A/µs Max.
- Maximum rate of rise of off-state voltage V_{DRM} that will not trigger device is 5kV/µs ($T_J = 70°C$).
- Breakdown voltage $V_{(BR)}$ has a positive temperature coefficient of +0.1%/°C.
- Above 70°C, derate linearly to zero @ 150°C lead temperature.
- 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.

**Bi-Directional
 100 Amp
 5 and 12 Volts
 Thyristor Surge
 Protective
 Device
 (TSPD)**

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



	INCHES MIN / MAX	MILLIMETERS MIN / MAX
A	.077 / .083	1.96 / 2.10
B	.160 / .180	4.06 / 4.57
C	.130 / .155	3.30 / 3.94
D	.205 / .220	5.21 / 5.59
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.