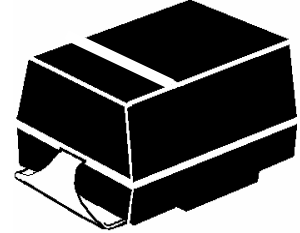


**DESCRIPTION**

This series of rectifier diodes provide a cost-effective plastic surface mount package with similar electrical parameters as the popular 1N5550 through 1N5554 series. It fits the same footprint as the DO-214AB (SMC) package. Also its rectangular profile design makes it easy to handle compared to cylindrical body style packages such as its standard 1N5550-1N5554US counterpart. This robust design also provides stress relief with its popular J-bend contacts when mounted on various substrate materials. Its unique axial subassembly also provides a very efficient thermal path for power dissipation for its 5 Amp forward ( $I_o$ ) current rating and superior surge performance. This also provides the same low thermal resistance of its military counterpart also offered by Microsemi in the Tungsten slug surface mount package.

**APPEARANCE**



**IMPORTANT:** For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

**FEATURES**

- Standard 5 Amp rectifier series 200 to 1000 V
- Economical plastic surface mount with robust axial subassembly package
- Options for screening in accordance with MIL-PRF-19500 for JAN, JANTX, and JANTXV are also available by adding MQ, MX, or MV prefixes respectively to part number, e.g. MXHSMCJ5550, MVHSMCJ5554, etc.
- RoHS Compliant devices available by adding "e3" suffix
- UL94V-0 Flammability Classification

**APPLICATIONS / BENEFITS**

- Standard 5 Amp rectifiers series 200 to 1000 V
- General rectifier applications including bridges, half-bridges, catch diodes, etc.
- High forward surge current capability
- Extremely robust internal construction
- Easy for pick-and-place equipment
- Low thermal resistance

**MAXIMUM RATINGS**

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Average Rectified Current ( $I_o$ ): 5 Amps @  $T_L = 55^\circ\text{C}$
- Thermal Resistance ( $R_{\theta JL}$ ): 11 °C /W (junction to mounting plane)
- Forward Surge Current (8.3 ms half sine): 200 Amps

**MECHANICAL AND PACKAGING**

- CASE: Void Free Transfer Molded Thermosetting Plastic (see modified DO-214AB dimensions and notes)
- TERMINALS: Tin-lead or RoHS compliant annealed matte-tin plating solderable to MIL-STD-750, method 2026
- POLARITY: Cathode Marked with Band
- MARKING: Part number without HSMCJ prefix, e.g. 5550, 5551, 5552, etc.
- WEIGHT: 0.4 Grams (Approx.)

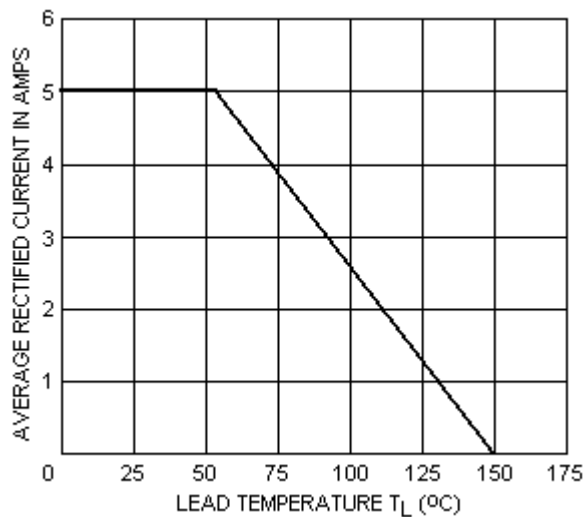
**ELECTRICAL CHARACTERISTICS @ 25 °C**

TYPE	MINIMUM REVERSE BREAKDOWN VOLTAGE @50µA	WORKING PEAK REVERSE VOLTAGE $V_{RWM}$ VOLTS	AVERAGE RECTIFIED CURRENT $I_o$ AMPS ( $T_L=55^\circ\text{C}$ )	FORWARD VOLTAGE $V_F$ @ 5 A		Reverse Current $I_R$ @ $V_{RWM}$ µA	REVERSE RECOVERY $t_{rr}$ µsec
				MIN.	MAX.		
HSMCJ5550	240	200	5.0	.6V	1.2V	1.0	2.0
HSMCJ5551	480	400	5.0	.6V	1.2V	1.0	2.0
HSMCJ5552	660	600	5.0	.6V	1.2V	1.0	2.0
HSMCJ5553	880	800	5.0	.6V	1.3V	1.0	2.0
HSMCJ5554	1100	1000	5.0	.6V	1.3V	1.0	2.0

SYMBOLS & DEFINITIONS

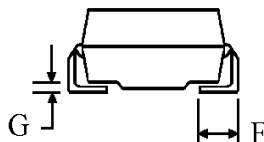
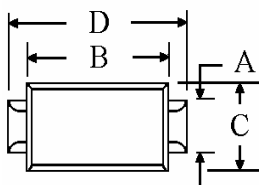
Symbol	Definition
$V_{BR}$	Minimum Breakdown Voltage: The minimum voltage the device will exhibit at a specified current.
$V_{RWM}$	Working Peak Reverse Voltage: The maximum peak voltage that can be applied over the operating temperature range.
$V_F$	Maximum Forward Voltage: The maximum forward voltage the device will exhibit at a specified current.
$I_R$	Maximum Reverse Current: The maximum reverse leakage current that will flow at the specified voltage and temperature.
C	Capacitance: The capacitance of the TVS as defined @ 0 volts at a frequency of 1 MHz and stated in picofarads.

GRAPHS



**FIGURE 2**  
MAXIMUM CURRENT vs. LEAD TEMPERATURE

PACKAGE DIMENSIONS



DIM	DIMENSIONS			
	INCHES		mm	
	MIN	MAX	MIN	MAX
A	.177	.203	4.50	5.15
B	.239	.243	6.08	6.18
C	.234	.240	5.95	6.10
D	.320	.330	8.13	8.38
E	.200	.214	5.08	5.43
F	.053	.067	1.35	1.70
G	.002	.025	0.05	0.64

- NOTES:**
1. Dimensions are in inches.
  2. Metric equivalents (to the nearest 0.01mm) are given for general information only and are based upon 1 inch = 25.4 mm mm.