



# MSCD052 THRU MSCD054

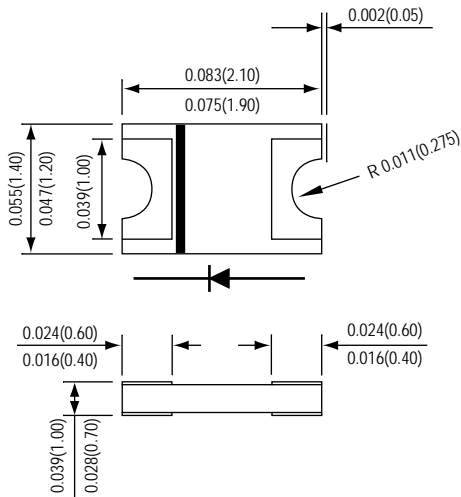
## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

*Reverse Voltage - 20 to 40 Volts*

*Forward Current - 500 mA*

**PATENTED**

**0805**



\*Dimensions in inches and (millimeters)

**SuperChip**<sup>TM</sup>



### FEATURES

- \* Lead free product
- \* Leadless chip form , no lead damage
- \* Lead-free solder joint , no wire bond & lead frame
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* For surface mounted applications
- \* Low profile package
- \* Built-in strain relief
- \* Metal to silicon rectifier , majority carrier conduction
- \* Low power loss , High efficiency
- \* High current capability , low VF
- \* High surge capacity
- \* For using in low voltage high frequency switching power supply, inverters , free wheeling , and polarity protection applications

### MECHANICAL DATA

**Case** : Packed with FRP substrate and epoxy underfilled

**Terminals** : Pure Tin plated (Lead-Free),  
solderable per MIL-STD-750, Method 2026.

**Polarity** : Cathode Band, Laser marking

**Weight** : 0.005 gram

**Marking** : MSCD052 = B2  
MSCD053 = B3  
MSCD054 = B4

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

<i>Ratings at 25 °C ambient temperature unless otherwise specified.</i>	SYMBOLS	MSCD052	MSCD053	MSCD054	UNITS
Maximum repetitive peak reverse voltage	VRRM	20	30	40	Volts
Maximum RMS voltage	VRMS	14	21	28	Volts
Maximum DC blocking voltage	VDC	20	30	40	Volts
Maximum average forward rectified current	Io	500			mA
Peak forward surge current at 8.3ms single half sine-wave	IFSM	5			Amps
Maximum Instantaneous forward voltage at 0.5A	VF	0.44	0.46	0.48	Volts
Maximum DC reverse current at rated DC blocking voltage	IR	100			uA
Junction temperature	TJ	125			°C
Operating temperature range	Topr	-40 to +125			
Storage temperature range	TSTG	-40 to +125			

# RATINGS AND CHARACTERISTIC CURVES MSCD052 THRU MSCD054

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

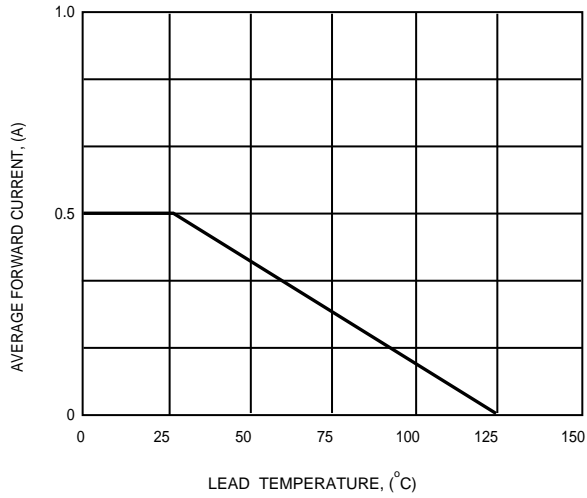


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

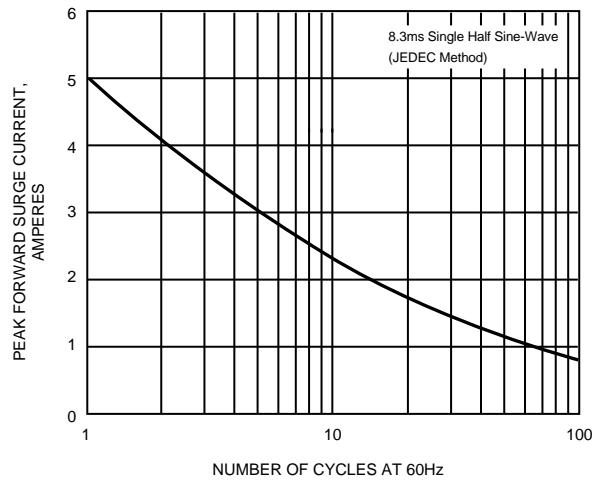


FIG. 3 - FORWARD CHARACTERISTICS

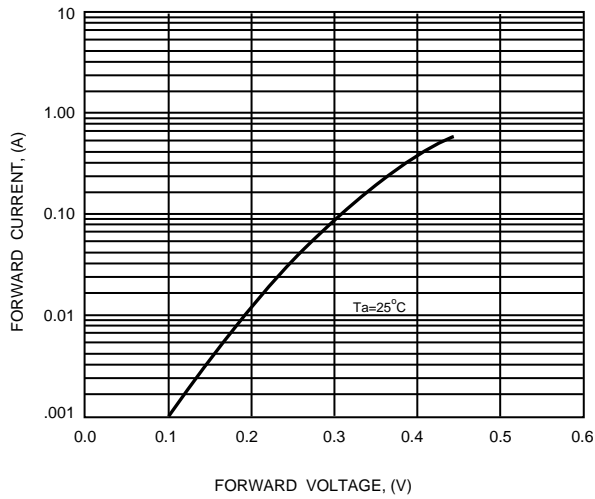


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

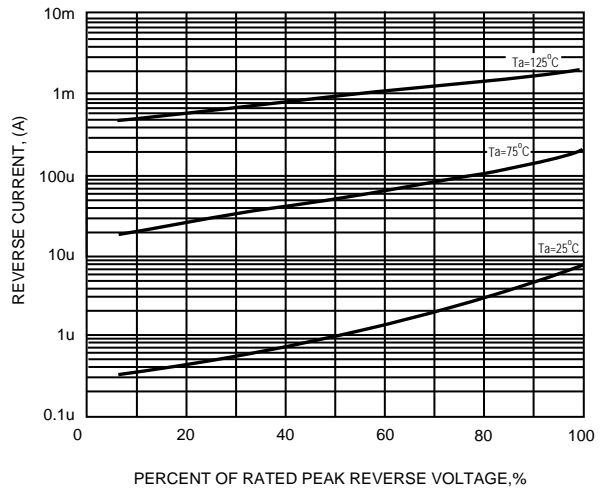


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

