



MSCD102 THRU MSCD106

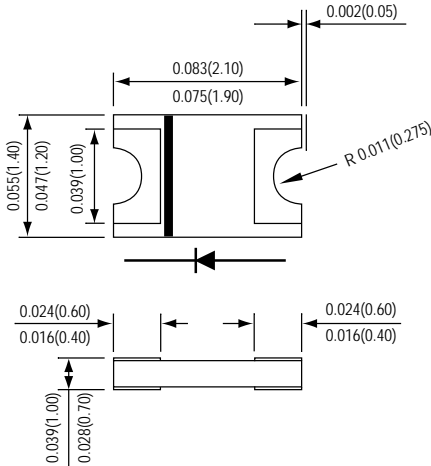
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 60 Volts

Forward Current - 1.0 Ampere

PATENTED

0805



*Dimensions in inches and (millimeters)

SuperChipTM



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 : MSCD102 = A2
MSCD104 = A4
MSCD106 = A6

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.	SYMBOLS	MSCD102	MSCD104	MSCD106	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	20	40	60	Volts
Maximum RMS voltage	V _{RMS}	14	28	42	Volts
Maximum DC blocking voltage	V _{DC}	20	40	60	Volts
Maximum average forward rectified current (SEE FIG.1)	I _O	1.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	10			Amps
Maximum instantaneous forward voltage at 1.0 A (NOTE 1)	V _F	0.45	0.50	0.65	Volts
Maximum DC reverse current (NOTE 1) @T _J =25°C at rated DC blocking voltage @T _J =100°C	I _R	0.2			mA
		10			
Typical thermal resistance (NOTE 2)	R _{θJA} R _{θJL}	88 28			°C / W
Operating junction temperature range	T _J	-55 to +125		-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150			°C

NOTES : (1) Pulse test width PW=300usec , 1% duty cycle.

(2) Mounted on P.C. board with 0.2 x 0.2"(5.0 x5.0mm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES MSCD102 THRU MSCD106

FIG.1 - FORWARD CURRENT DERATING CURVE

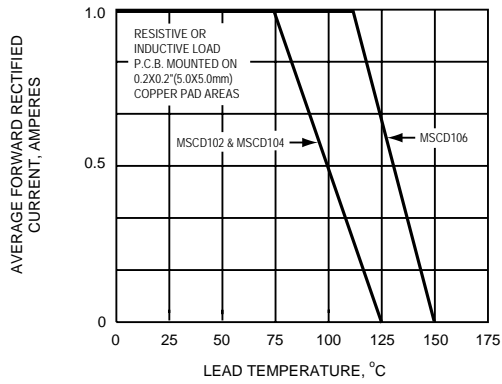


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

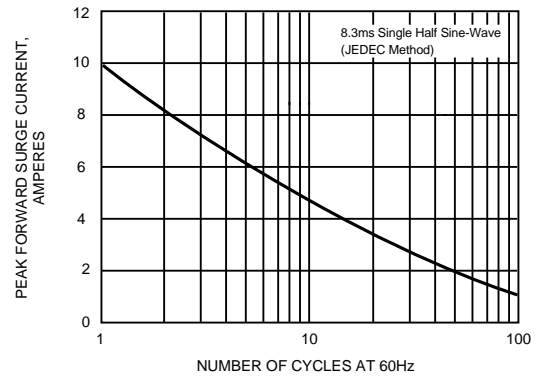


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

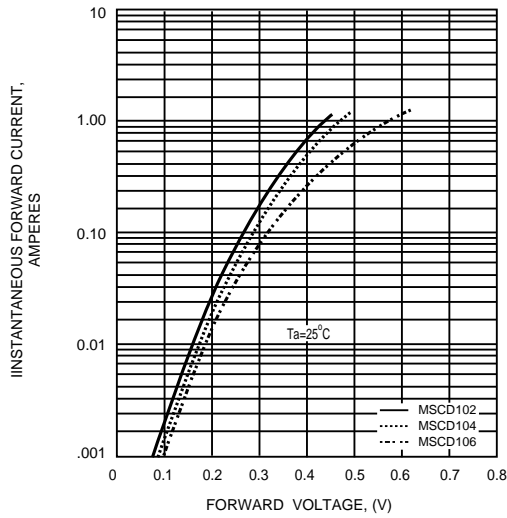


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

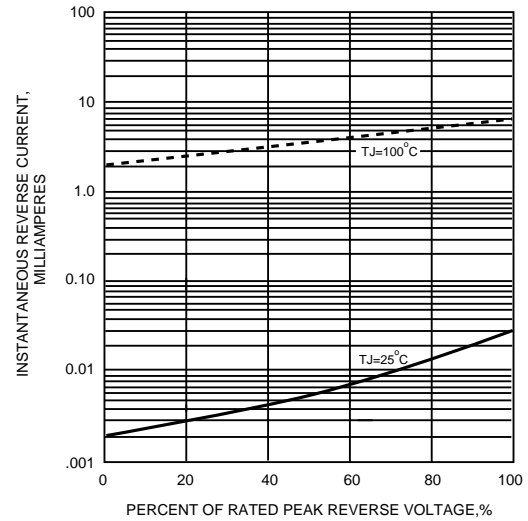


FIG.5 - TYPICAL JUNCTION CAPACITANCE

