



## SC52H THRU SC510H SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

*Reverse Voltage - 20 to 100 Volts*

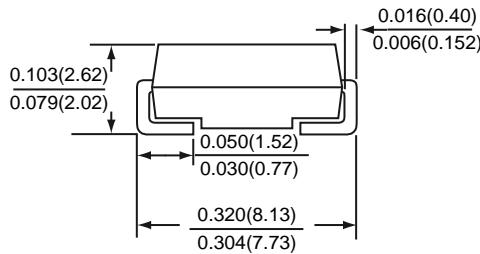
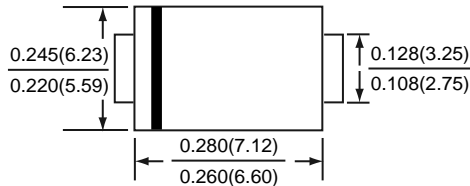
*Forward Current - 5.0 Amperes*

**SMC / DO-214AB**



### FEATURES

- \* Halogen-free type
- \* Compliance to RoHS product
- \* Low profile package, Built-in strain relief
- \* Metal silicon junction, majority carrier conduction
- \* Low power loss, high efficiency
- \* High current capability, low forward voltage drop
- \* High surge capability
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- \* High temperature soldering guaranteed :  
260°C/10 seconds, at terminals
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0



\*Dimensions in inches and (millimeters)

### MECHANICAL DATA

**Case :** JEDEC DO-214AB molded plastic body  
**Terminals :** Tin plated, solderable per MIL-STD-750D Method 2026  
**Polarity :** Color band denotes cathode end  
**Weight :** 0.007 ounces , 0.21 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

<i>Ratings at 25 °C ambient temperature unless otherwise specified.</i>		SYMBOLS	SC52H	SC54H	SC56H	SC510H	UNITS
Maximum repetitive peak reverse voltage		VRRM	20	40	60	100	Volts
Maximum RMS voltage		VRMS	14	28	42	70	Volts
Maximum DC blocking voltage		VDC	20	40	60	100	Volts
Maximum average forward rectified current (SEE FIG.1)		I(AV)	5.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load		IFSM	125				Amps
Maximum instantaneous forward voltage at 5.0 A (NOTE 1)		VF	0.55	0.70	0.85		Volts
Maximum DC reverse current at rated DC blocking voltage (NOTE 1)	TA=25°C	IR	0.5				mA
	TA=100°C		20	10			
Typical thermal resistance (NOTE 2)		R θJA	40				°C / W
		R θJL	10				
Operating junction temperature range		TJ	-55 to +125		-55 to +150		°C
Storage temperature range		TSTG	-55 to +150				°C

NOTES : (1) Pulse test : 300us pulse width, 1% duty cycle  
 (2) P.C.B. mounted with 0.55 x 0.55" ( 14 x 14mm ) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES SC52H THRU SC510H

FIG. 1 - FORWARD CURRENT DERATING CURVE

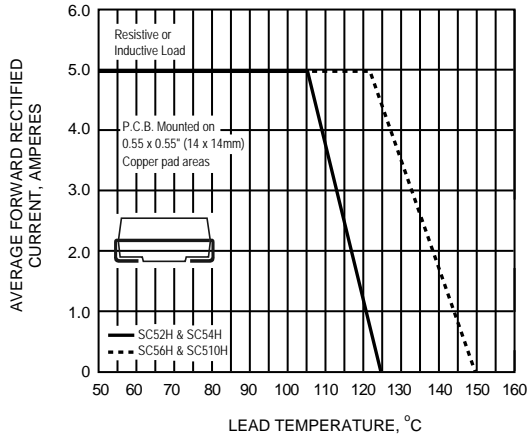


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

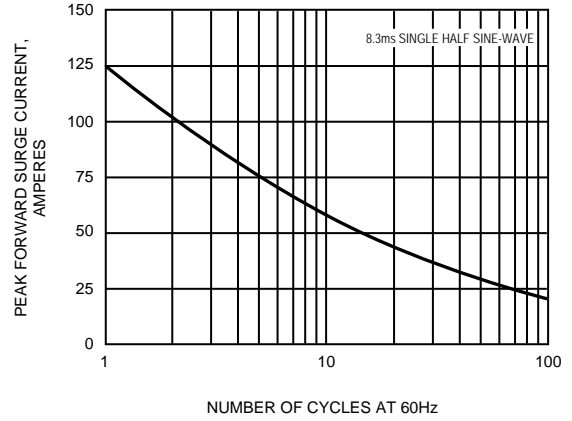


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

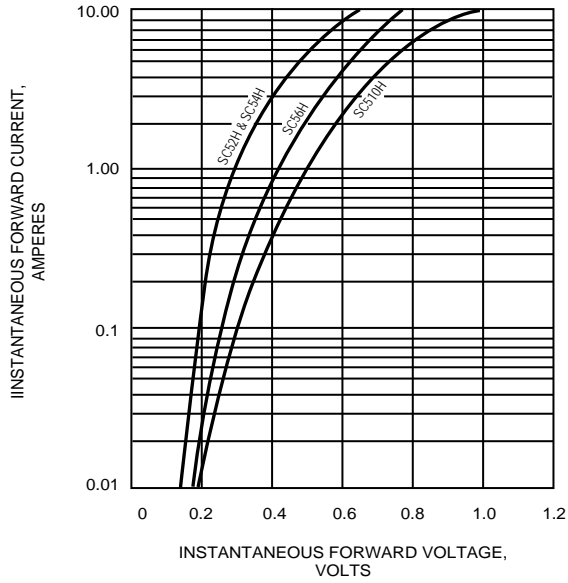


FIG. 4 - TYPICAL REVERSE CURRENT CHARACTERISTICS

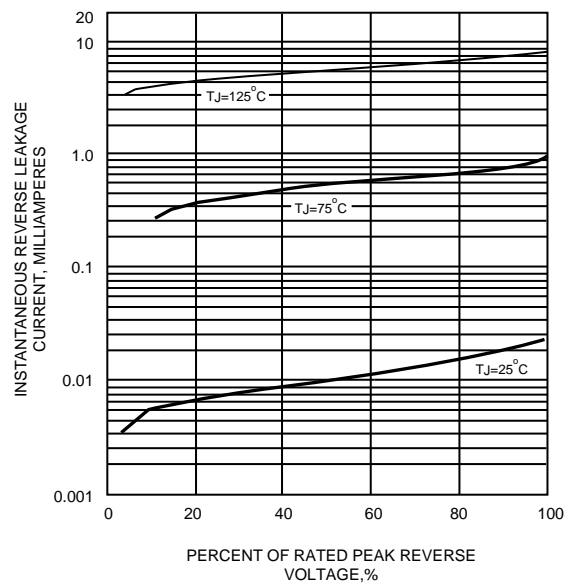


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

