

# SD1545

## SCHOTTKY BARRIER RECTIFIER DIODE

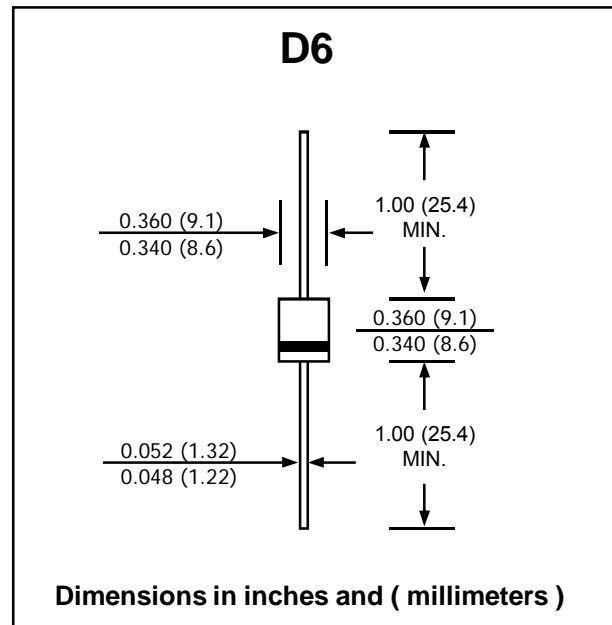
**PRV : 45 Volts**  
**I<sub>o</sub> : 15 Amperes**

### FEATURES :

- \* High current capability
- \* Low forward voltage drop
- \* High surge capacity
- \* Low power loss, High efficiency
- \* Guard ring for transient protection
- \* Pb / RoHS Free

### MECHANICAL DATA :

- \* Case : Void-free molded plastic body
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 2.1 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	45	V
Maximum RMS Voltage	V <sub>RMS</sub>	32	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	45	V
Maximum Average Forward Current at T <sub>c</sub> = 25 °C	I <sub>F(AV)</sub>	15	A
Maximum Peak Forward Surge Current @ 10ms sine wave	I <sub>FSM</sub>	300	A
Maximum Instantaneous Forward Voltage at I <sub>F</sub> = 15 A	V <sub>F</sub>	0.54	V
Maximum Reverse Current at @ (T <sub>J</sub> = 25 °C)	I <sub>R</sub>	0.20	mA
Rated DC Blocking Voltage (Note 1) @ (T <sub>J</sub> = 125 °C)	I <sub>R(H)</sub>	70	mA
Maximum Junction Capacitance (Note 2)	C <sub>J</sub>	900	pF
Typical Thermal Resistance Junction to Lead (Note 3)	R <sub>θJL</sub>	8.0	K/W
Operating Junction Temperature Range at reduced reverse voltage V <sub>R</sub> ≤ 80% V <sub>RRM</sub> V <sub>R</sub> ≤ 50% V <sub>RRM</sub> in DC forward mode	T <sub>J</sub>	- 50 to + 150 ≤ 180 ≤ 200	°C
Storage Temperature Range	T <sub>STG</sub>	- 50 to + 175	°C

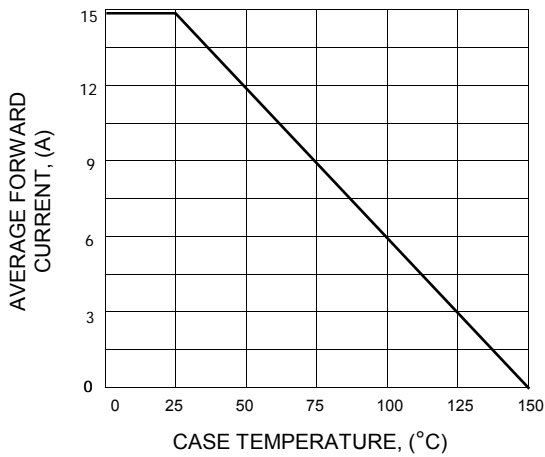
Notes : (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 2%.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V.

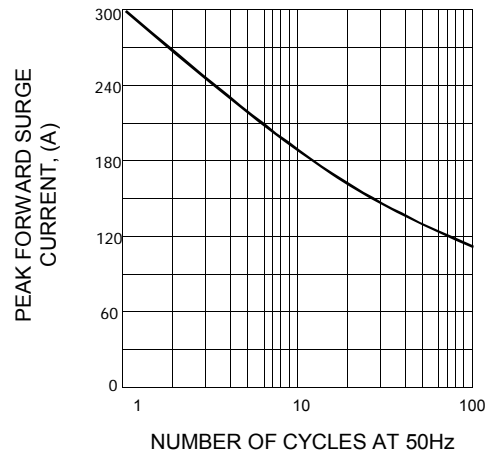
(3) Thermal resistance from junction to lead vertical PC board mounting, 9.5 mm lead length.

**RATING AND CHARACTERISTIC CURVES ( SD1545 )**

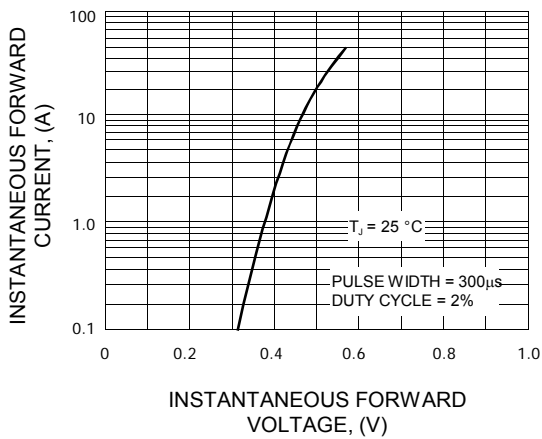
**FIG.1 - FORWARD CURRENT DERATING CURVE**



**FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

