

## Schottky Diodes



### Features

- High frequency operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7s, per JESD 22-B106

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection

### Mechanical Data

**Package:** R-6

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant

**Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

**Polarity:** Color band denotes cathode end



### Maximum Ratings (T<sub>a</sub>=25 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	20SQ045
Device Marking Code			20SQ045
Repetitive Peak Reverse Voltage	VRRM	V	45
Average Rectified Output Current @60Hz sine wave, R-load, T <sub>a</sub> =25	I <sub>O</sub>	A	20
Surge(Non-repetitive)Forward Current @60Hz half sine wave, 1 cycle, T <sub>a</sub> =25	I <sub>FSM</sub>	A	375
Current Squared Time @1ms t 8.3ms T <sub>j</sub> =25	I <sup>2</sup> t	A <sup>2</sup> s	583
Storage Temperature	T <sub>stg</sub>		-55 ~+150
Junction Temperature IN DC Forward Mode-Forward Operations without reverse bias, t 1 h (Fig. 1)	T <sub>j</sub>		-55 ~+200

### NOTE

- ① Meets the requirements of IEC 61215 Ed. 2 bypass diode thermal test.

### Electrical Characteristics T<sub>a</sub>=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	20SQ045
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	I <sub>FM</sub> =20.0A	0.51
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	mA	V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =25	0.5
	I <sub>RRM2</sub>		V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =100	50

### Thermal Characteristics T<sub>a</sub>=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	20SQ045	
Thermal Resistance	Between junction and case	R J-C	/W	2.5

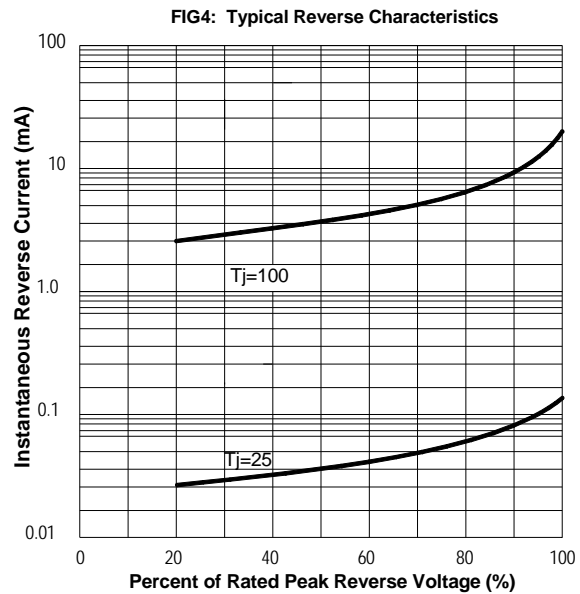
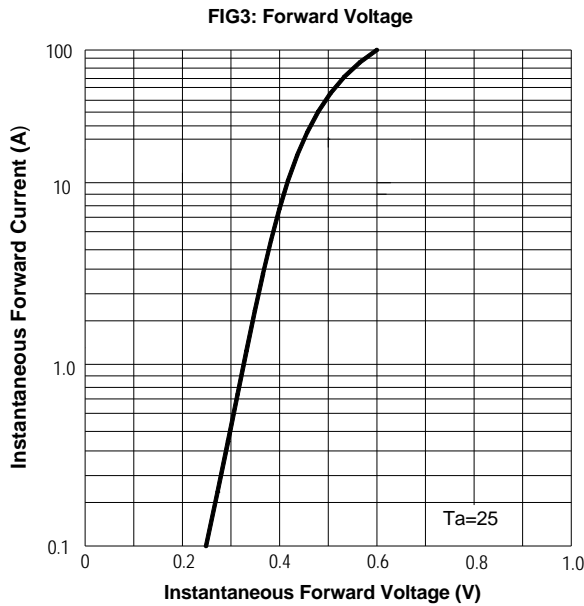
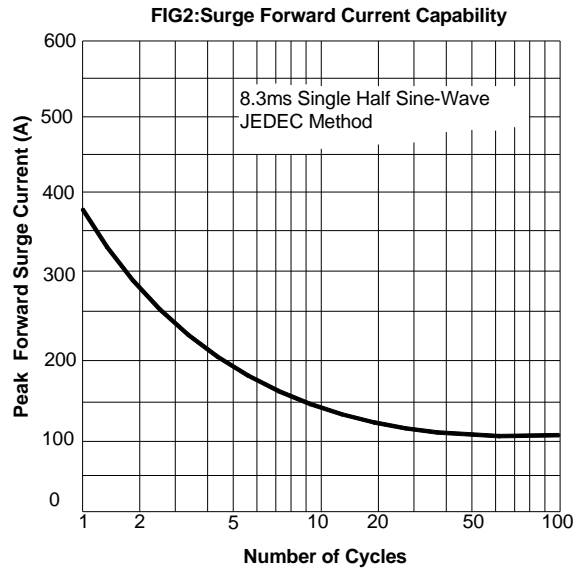
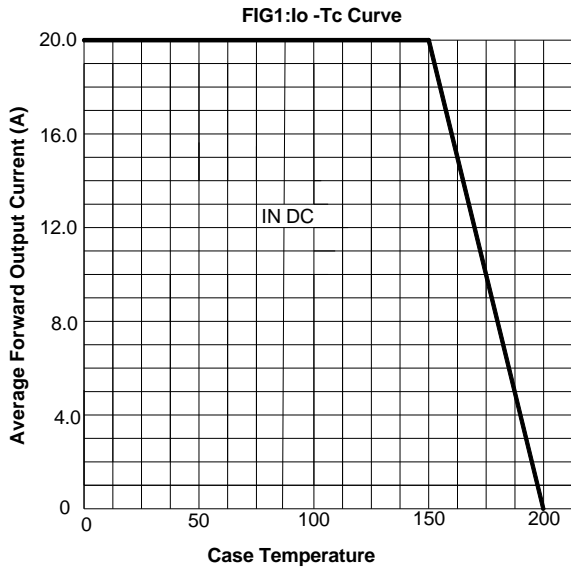


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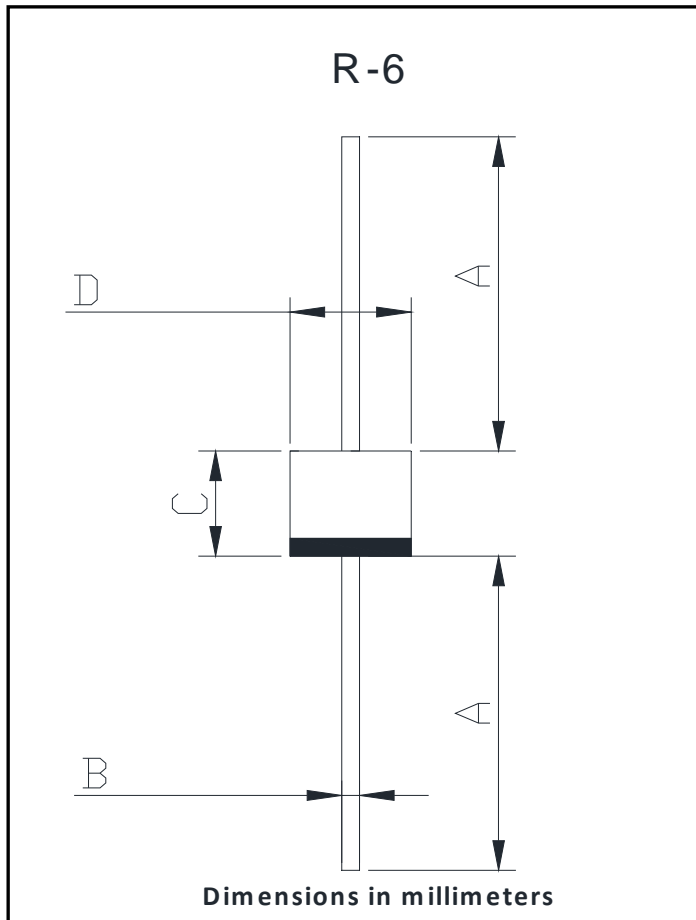
## Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
20SQ045	Approximate 1.96	500	10	5000	Tape
20SQ045	Approximate 1.96	1000	4	4000	Reel

## Characteristics (Typical)



Outline Dimensions



R-6		
Dim	Min	Max
A	25.4	/
B	1.2	1.3
C	8.6	9.1
D	8.6	9.1



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