

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 ($T_a=25$ 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, $T_a=25$	IO	A	20
Surge(Non-repetitive)Forward Current @60Hz half sine wave, 1 cycle, $T_a=25$	IFSM	A	375
Current Squared Time @1ms $t \leq 8.3ms$ $T_j=25$	I^2t	A ² s	583
Storage Temperature	T_{stg}		-55 ~+150
Junction Temperature IN DC Forward Mode-Forward Operations without reverse bias, $t \leq 1$ h (Fig. 1)	T_j		-55 ~+200

NOTE

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

Electrical Characteristics $T_a=25$ Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	20SQ045
Maximum instantaneous forward voltage drop per diode	VFM	V	IFM=20.0A	0.51
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	VRM=VRRM $T_a=25$	0.5
	I _{RRM2}		VRM=VRRM $T_a=100$	50

Thermal Characteristics $T_a=25$ Unless otherwise specified

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

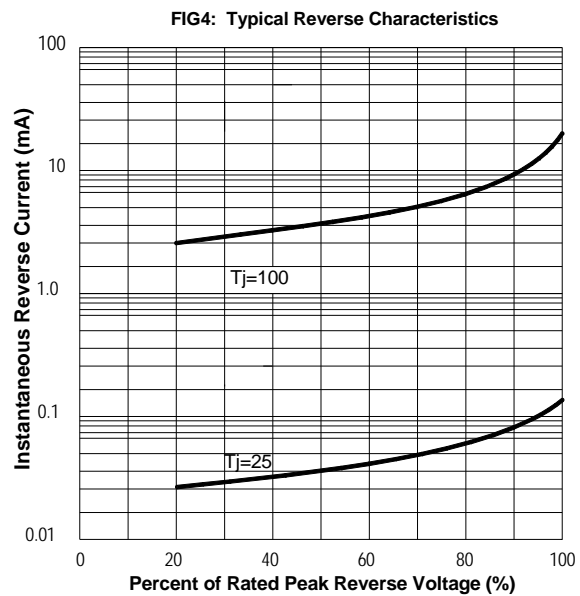
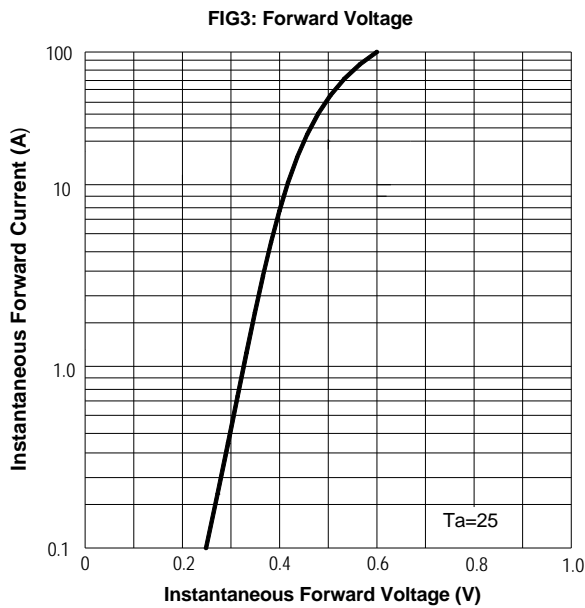
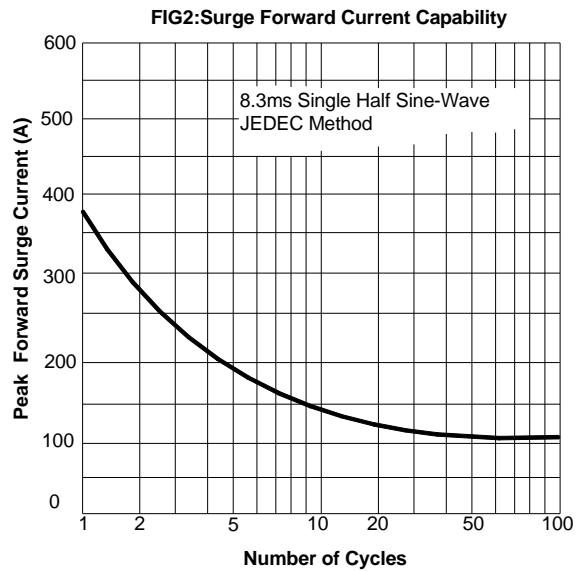
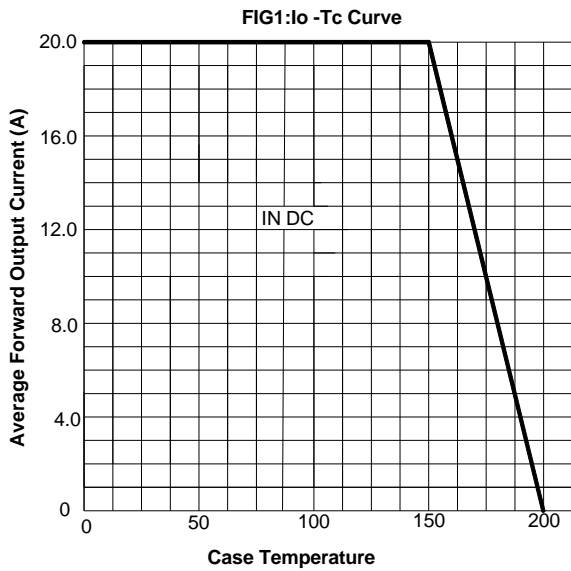


20SQ045

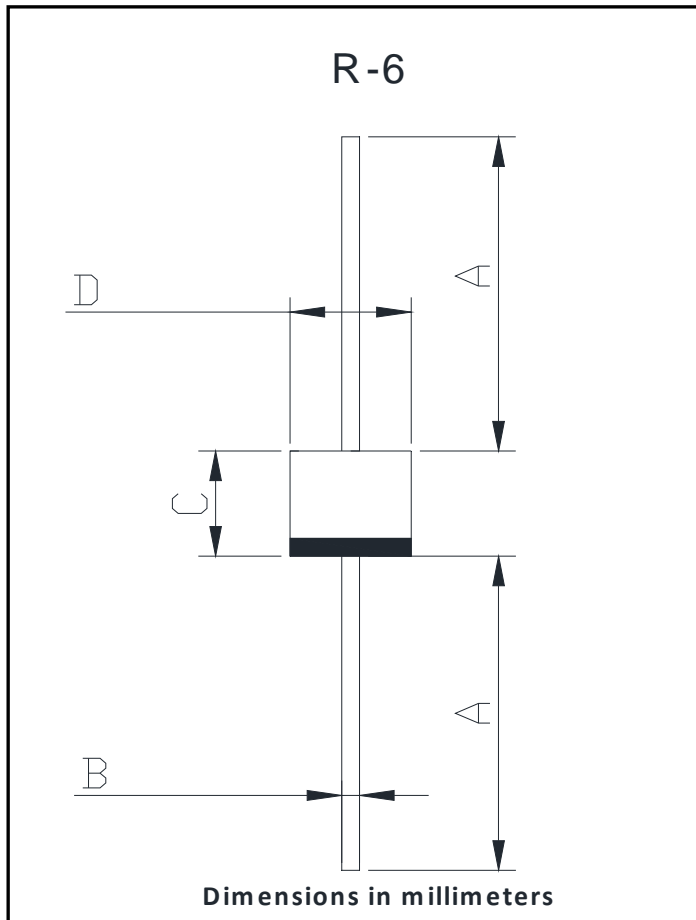
Ordering Information (Example)

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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