

Features

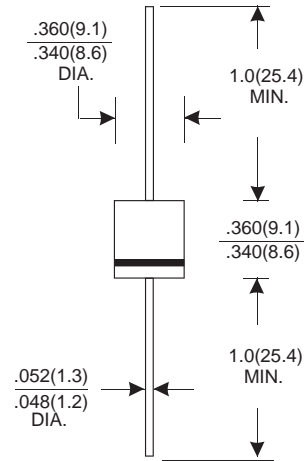
- High surge Forward current capability
- High efficiency
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7s, per JESD 22-B106
- High current capability, low VF

Typical Applications

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

MECHANICAL DATA

- Case: JEDEC R-6 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.07 ounces , 2.1 grams
- Mounting position: Any



Dimensions in inches and (millimeters)

Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	15SQ045
Device marking code			15SQ045
Repetitive Peak Reverse Voltage	VRRM	V	45
Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25^\circ\text{C}$	I_O	A	15
Surge(Non-repetitive)Forward Current @60Hz half sine wave, 1 cycle, $T_a=25^\circ\text{C}$	IFSM	A	325
Current Squared Time @1ms \leq t \leq 8.3ms $T_j=25^\circ\text{C}$	I^2t	A ² s	427
Storage Temperature	Tstg	°C	-55 ~+150
Junction Temperature@ IN DC Forward Mode-Forward Operations, without reverse bias, t \leq 1 h (Fig. 1) ^①	T_j	°C	-55 ~+200

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	15SQ045
Maximum instantaneous forward voltage drop per diode	VFM	V	IFM=15.0A	0.5
Maximum DC reverse current at rated DC blocking voltage per diode	IRRM1	μA	VRM=VRRM $T_a=25^\circ\text{C}$	0.5
	IRRM2		VRM=VRRM $T_a=100^\circ\text{C}$	50

Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified) $R_{\theta J-C}$

PARAMETER	SYMBOL	UNIT	15SQ045	
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	°C/W	2.2

NOTE

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

FIG.1-FORWARD CURRENT DERATING CURVE

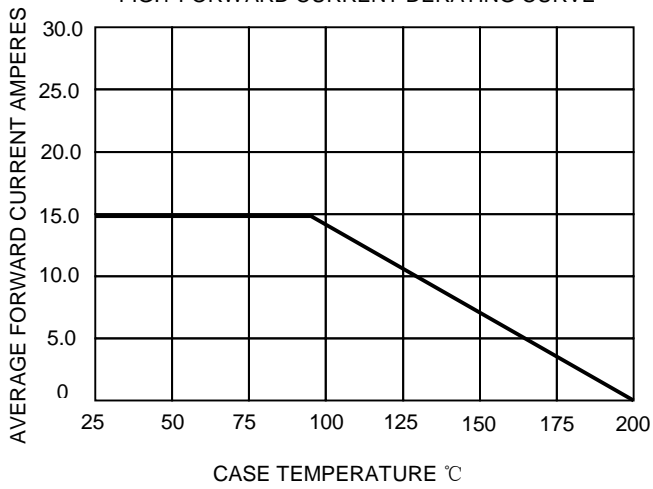


FIG.2-MAXIMUM NON-REPETITIVE SURGE

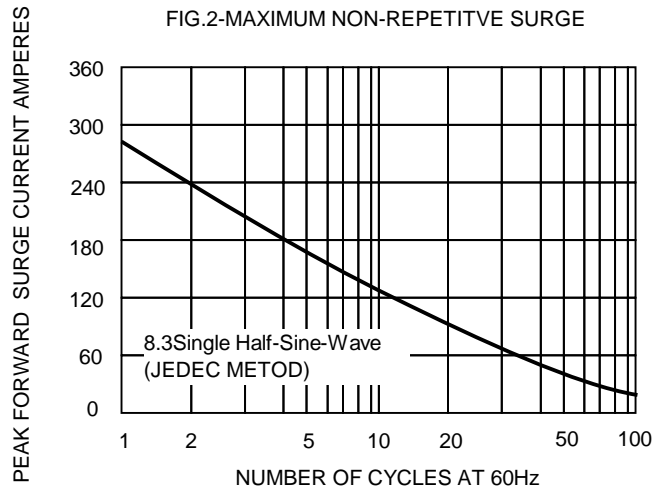


FIG.3-TYPICAL REVERSE CHARACTERISTICS

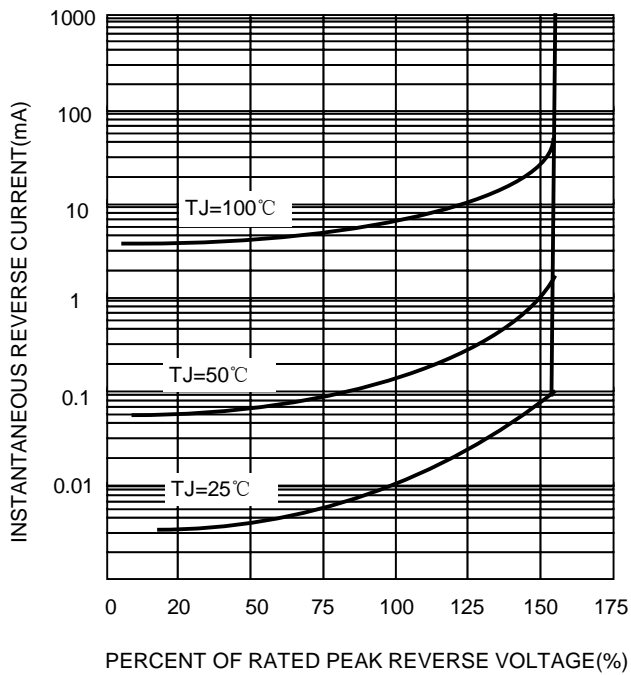


FIG.4-TYPICAL FORWARD CHARACTERISTICS

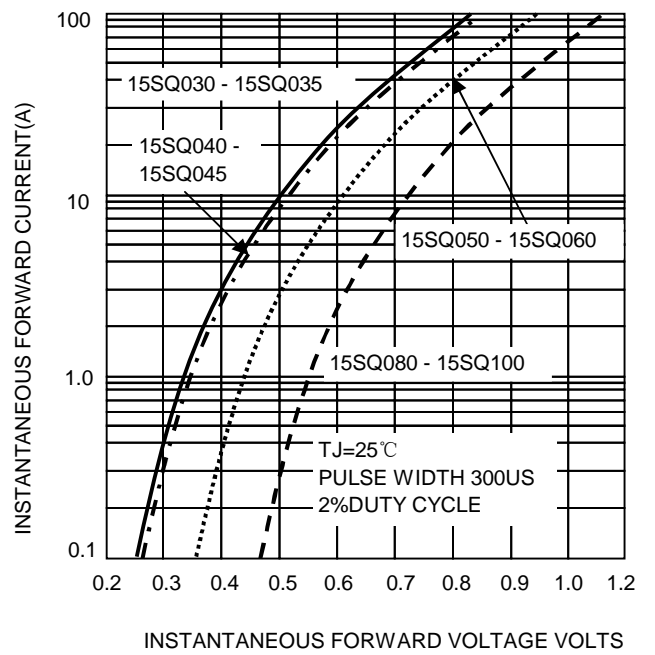


FIG.5-TYPICAL JUNCTION CAPACITANCE

