

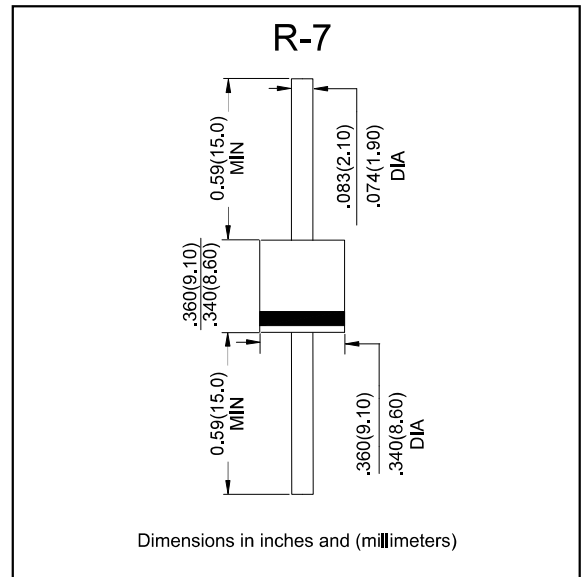
### Features

- 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
- Suffix "-H" indicates Halogen free parts,ex,30SQ045-H

### Mechanical Data

- **Package:** R-7  
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

### Package outline



### Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig. 1	$I_o$			30	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	$I_{FSM}$			380	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^{\circ}\text{C}$	$I_R$			0.5	mA
	$V_R = V_{RRM} \quad T_A = 100^{\circ}\text{C}$				50	
Thermal resistance	Junction to case	$R_{\theta JC}$		2.0		$^{\circ}\text{C}/\text{W}$
Storage temperature		$T_{STG}$	-55		+150	$^{\circ}\text{C}$

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_{Ji}$ ( $^{\circ}\text{C}$ )
30SQ045	45	31.5	45	0.55	-55 to +200

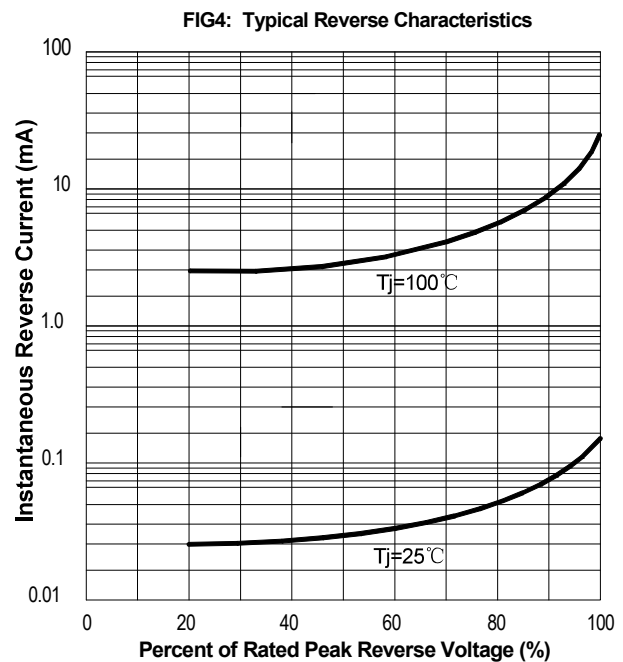
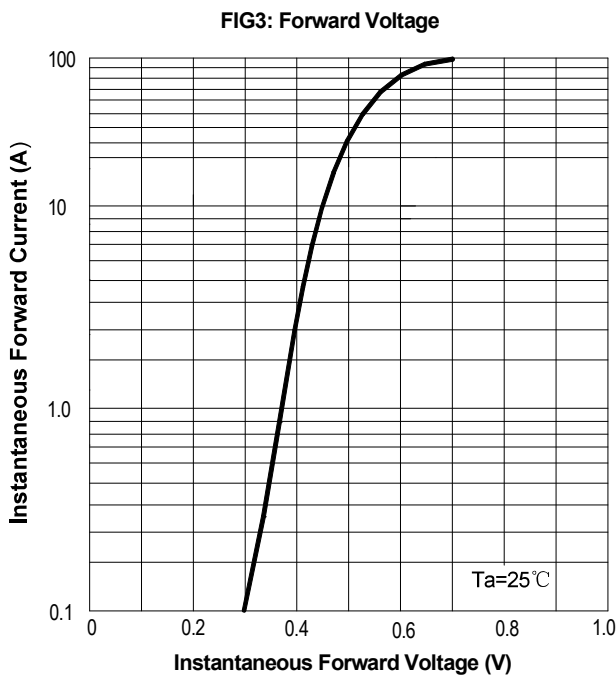
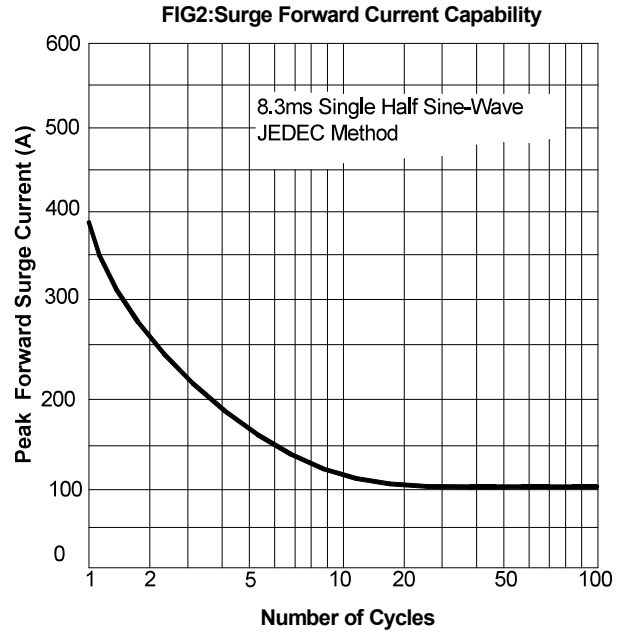
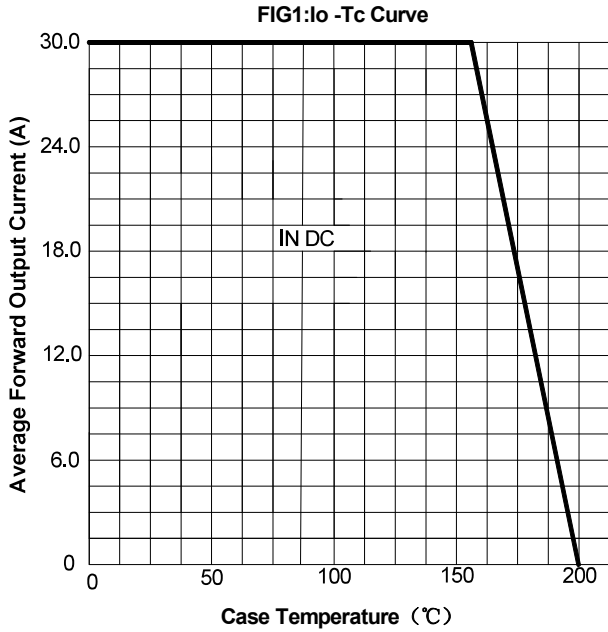
\*1 Repetitive peak reverse voltage

\*2 RMS voltage



\*3 Continuous reverse voltage

\*4 Maximum forward voltage  
 $I_F = 30.0\text{A}, 25^{\circ}\text{C}$

### Characteristics (Typical)



### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
30SQ045	30SQ045