

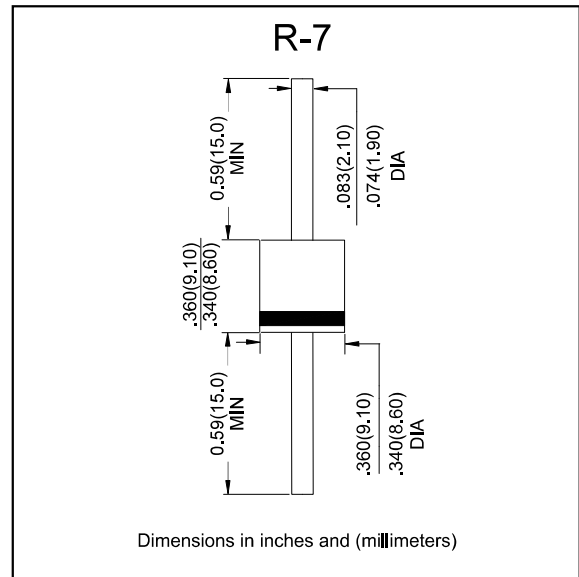
Features

- 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, 40SQ045-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			40	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			450	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} ($^\circ\text{C}$)
40SQ045	45	31.5	45	0.55	-55 to +200

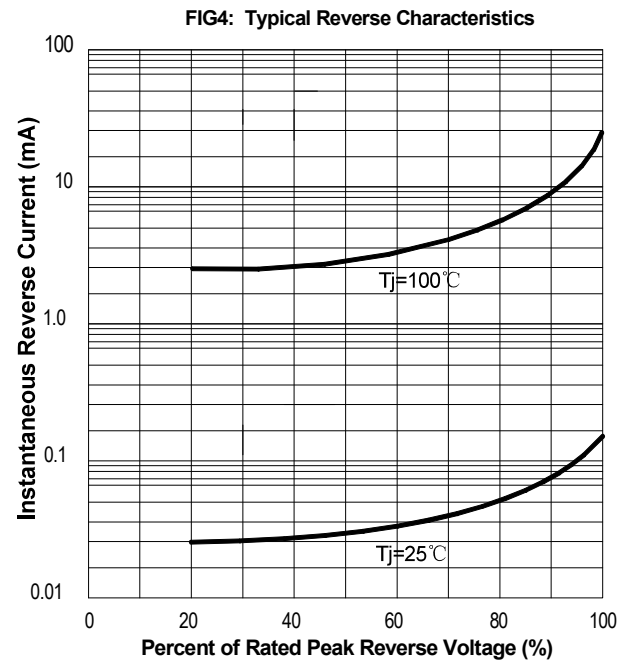
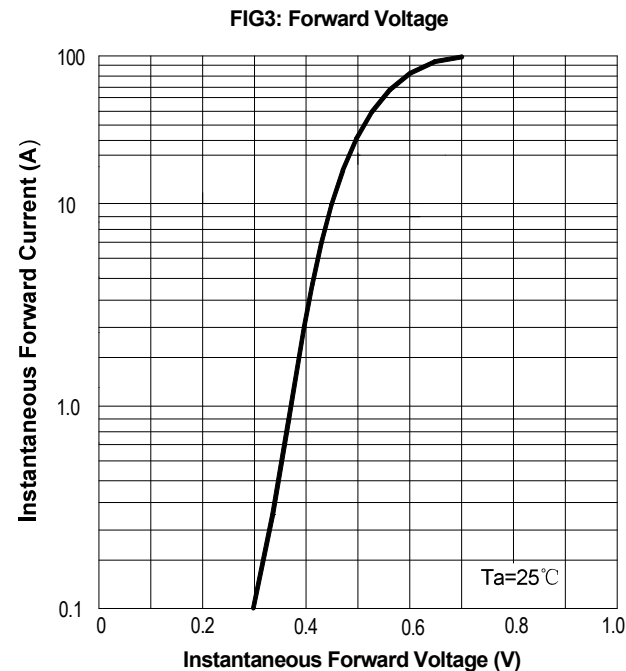
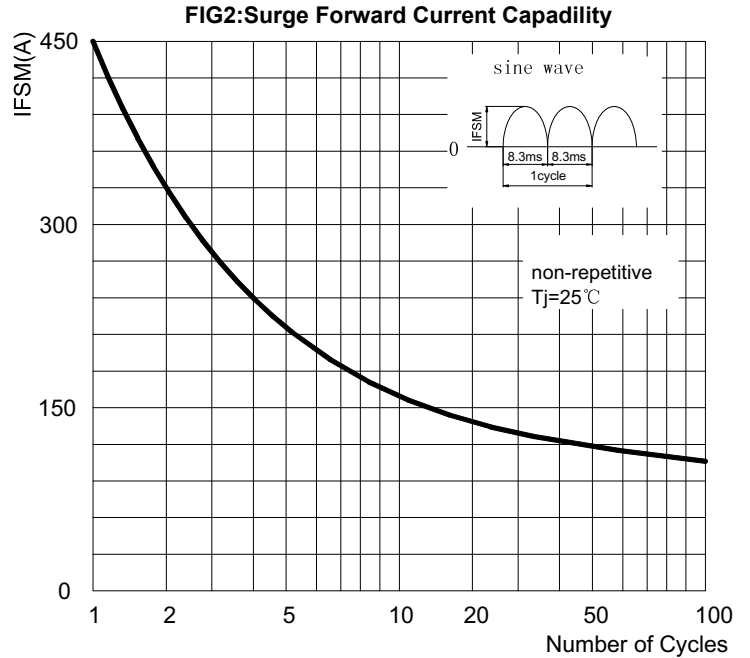
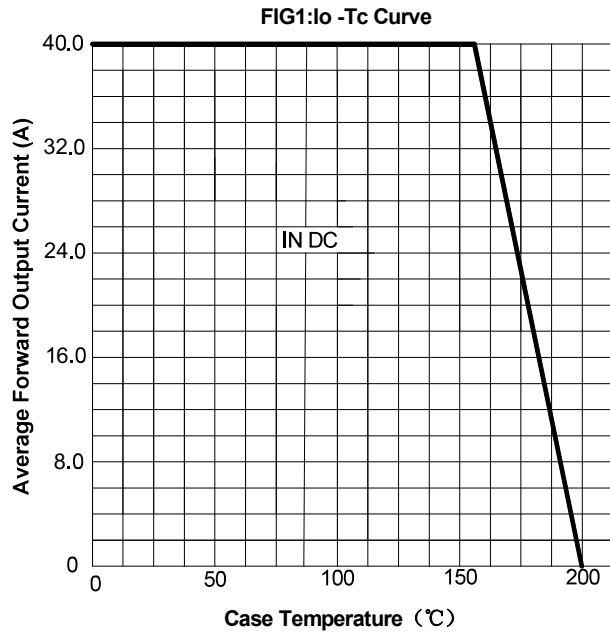
*1 Repetitive peak reverse voltage

*2 RMS voltage



*3 Continuous reverse voltage

*4 Maximum forward voltage
 $I_F = 40.0\text{A}, 25^\circ\text{C}$

Characteristics (Typical)



Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
40SQ045	40SQ045