

Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- High Surge Forward Current Capability
- High Efficiency
- Epoxy Meets UL 94 V-0 Flammability Rating

Maximum Ratings

- Operating Junction Temperature Range(In DC Forward Mode-Forward Operations,Without Reverse Bias, $t \leq 1h$ (Fig. 1)(Note2): -55°C to $+200^{\circ}\text{C}$
- Storage Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Typical Thermal Resistance: 1.5°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
30SQ045	30SQ045	45V	31.5V	45V

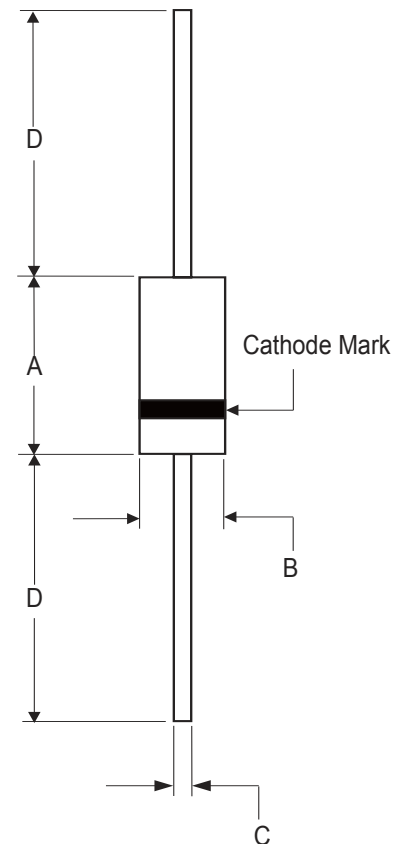
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	30A	$T_C=150^{\circ}\text{C}$
Peak Forward Surge Current	I_{FSM}	275A	8.3ms,Half Sine
Maximum Instantaneous Forward Voltage	V_F	0.52V	$I_{FM}=30A;$ $T_J=25^{\circ}\text{C}$
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.1mA 7.0mA 20mA	$T_J=25^{\circ}\text{C}$ $T_J=100^{\circ}\text{C}$ $T_J=125^{\circ}\text{C}$
Current Squared Time	I^2T	315A ² S	$1\text{ms} \leq t \leq 8.3\text{ms}$ $T_J=25^{\circ}\text{C}$

- Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
2. Meets the requirements of IEC 61215 Ed. 2 bypass diode thermal test.

30 Amp Rectifier 45 Volts

R-6



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.340	0.360	8.60	9.10	
B	0.340	0.360	8.60	9.10	
C	0.048	0.052	1.20	1.32	
D	1.000	-----	25.40	-----	

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

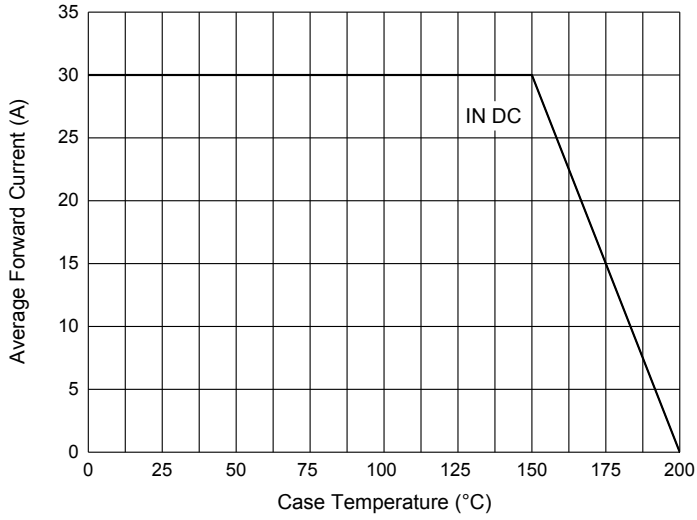


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

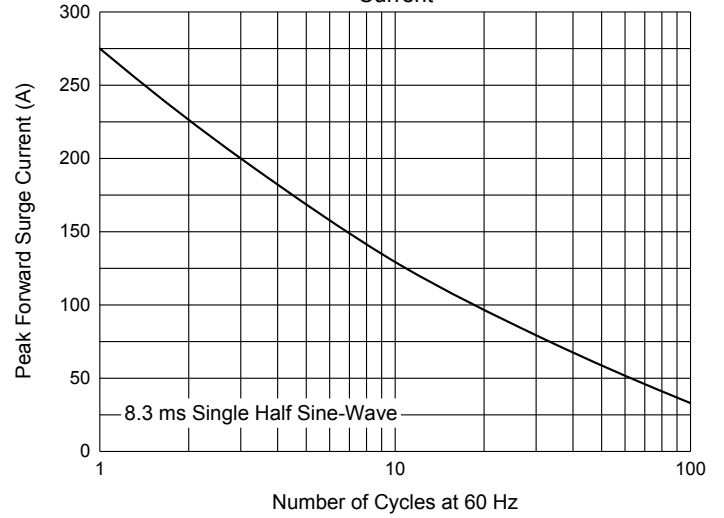


Fig. 3 - Typical Instantaneous Forward Characteristics

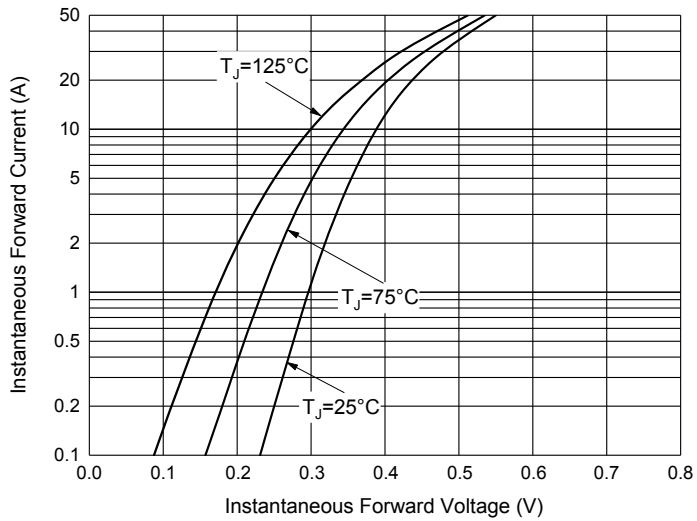
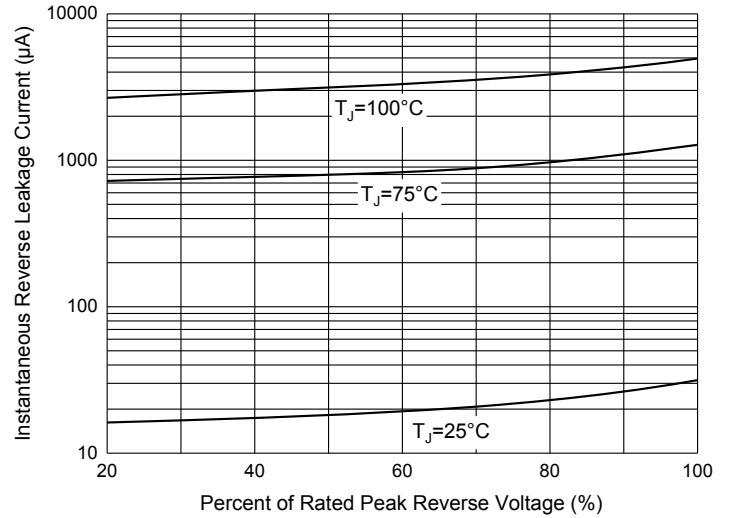


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 500pcs/Reel
Part Number-AP	Ammo Packing: 450pcs/Ammo Box
Part Number-BP	Bulk: 200pcs/Box ;4.8Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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