

# 30SQ045

## 30 Amp Rectifier 45Volts

### Features

- Lead Free Finish/Rohs Compliant (Note1) ("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
- Moisture Sensitivity Level 1

### Maximum Ratings

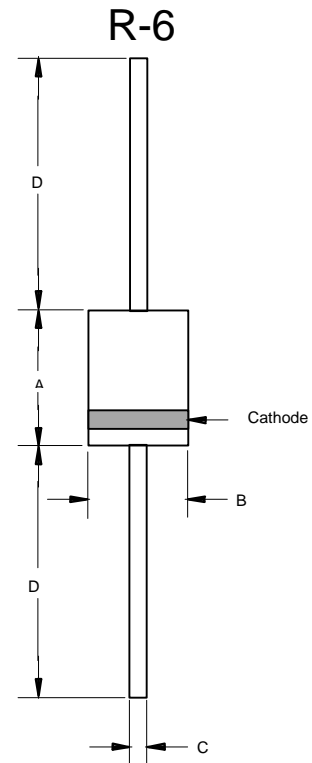
- Junction Temperature(In DC Forward Mode-Forward Operations, without reverse bias,  $t \leq 1h$ (Fig. 1)(Note2)) :  $-55^{\circ}C$  to  $+200^{\circ}C$
- Storage Temperature:  $-55^{\circ}C$  to  $+150^{\circ}C$

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

### Electrical Characteristics @ $25^{\circ}C$ Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	30 A	$T_c = 150^{\circ}C$
Peak Forward Surge Current	$I_{FSM}$	275A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	0.52V	$I_{FM} = 30A;$ $T_A = 25^{\circ}C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	0.1mA 7.0mA 20mA	$T_A = 25^{\circ}C$ $T_A = 100^{\circ}C$ $T_A = 125^{\circ}C$
Current Squared Time	$I^2t$	315A <sup>2</sup> S	$1ms \leq t \leq 8.3ms$ $T_j = 25^{\circ}C$
Typical Thermal Resistance Junction to Case	$R_{thJC}$	1.5 $^{\circ}C/W$	

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



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.340	.360	8.60	9.10	
B	.340	.360	8.60	9.10	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

■ Characteristics (Typical)

FIG1: I<sub>o</sub> -T<sub>c</sub> Curve

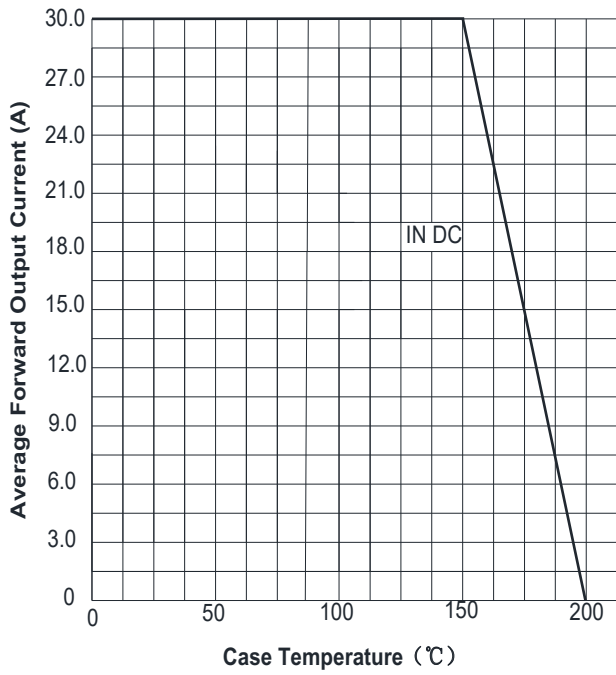


FIG2: Surge Forward Current Capability

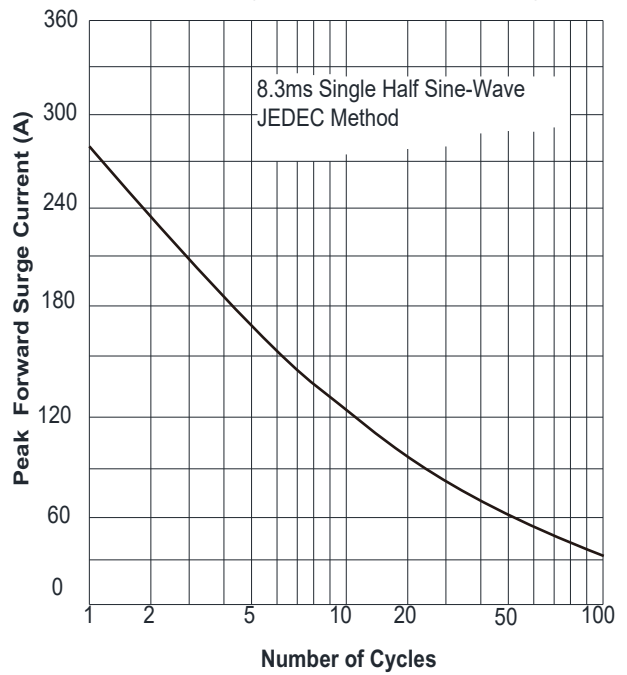


FIG3: Forward Voltage

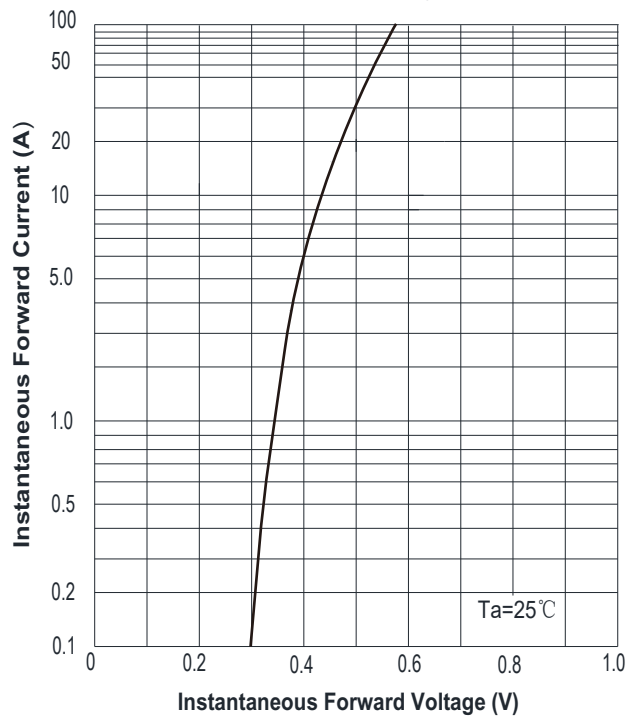
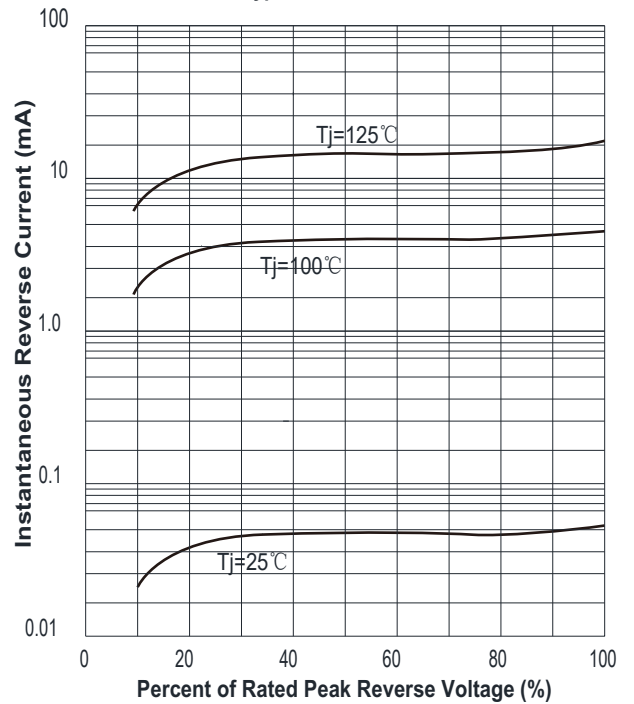


FIG4: Typical Reverse Characteristics





Micro Commercial Components

### Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

#### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

#### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

#### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.