

# EM513 THRU EM518

## Features

- Halogen free available upon request by adding suffix "-HF"
- High reverse voltage
- Low reverse leakage
- High forward surge current capability.
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix designates Compliant. See ordering information)
- Weight: 0.012 ounce, 0.33grams
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
EM513	1600V	1120V	1600V
EM516	1800V	1260V	1800V
EM518	2000V	1400V	2000V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

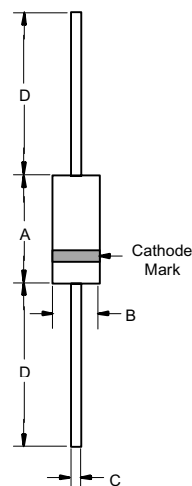
Average Forward Current	$I_O$	1.0A	.375" (9.5mm) Lead Length $T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	25A	8.3ms, half sine
Maximum Instantaneous Forward Voltage EM513~EM516 EM518	$V_F$	1.1V 1.2V	$I_{FM} = 1.0A$ ; $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5μA 50μA	$T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$
Typical Junction Capacitance	$C_J$	15pF	Measured at 1.0MHz, $V_R=4.0V$
Typical Thermal Resistance	$R_{thja}$	50°C/W	(Note 1)

Note 1: Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, P.C. board mounted.

2: High Temperature Solder Exemption Applied, see EU Directive Annex 7.

## 1.0 Amp General Purpose Plastic Rectifier 1600 to 2000 Volts

### DO-41



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

## EM513 THRU EM518

FIG.1-TYPICAL FORWARD CURRENT  
DERATING CURVE

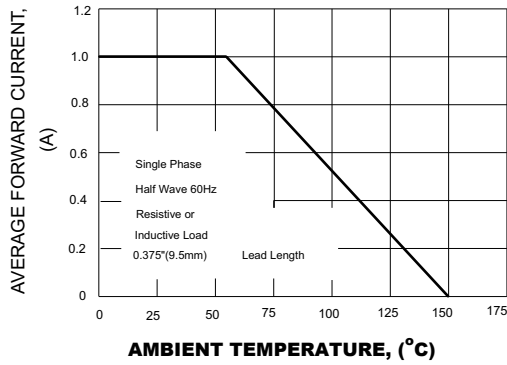


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT

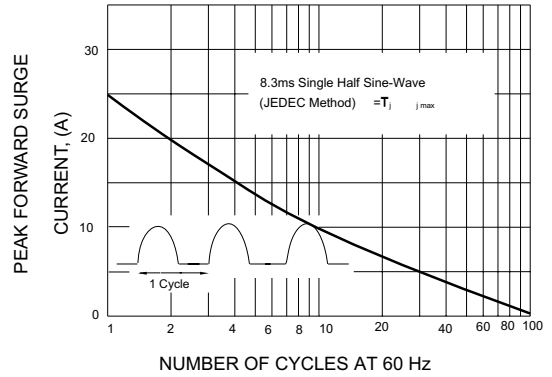


FIG.3-TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

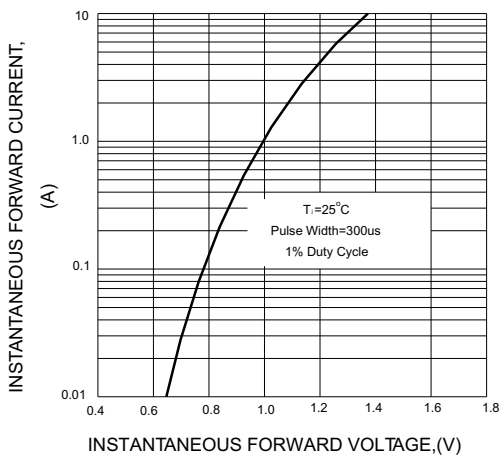


FIG.4-TYPICAL REVERSE  
CHARACTERISTICS

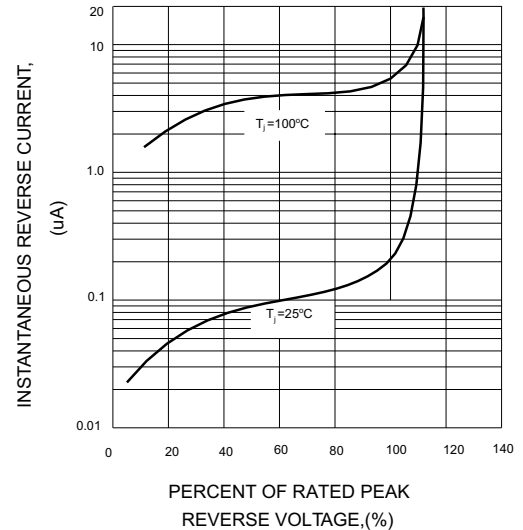
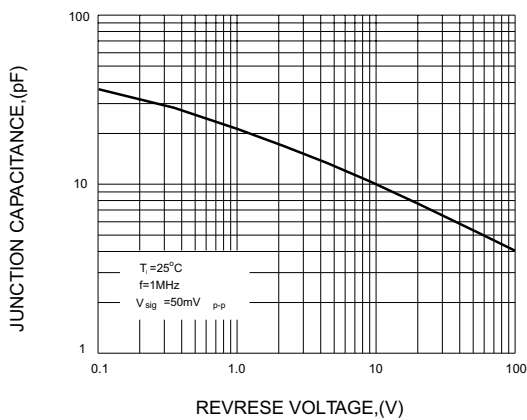


FIG.5-TYPICAL JUNCTION CAPACITANCE



## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 5Kpcs/Reel
Part Number-AP	Ammo Packing;5Kpcs/AmmoBox
Part Number-BP	Bulk: 50Kpcs/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.