

**Features**

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Low Forward Voltage
- Guard Ring Protection
- High Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

**Maximum Ratings**

- Operating Junction Temperature Range(SS12E~14E): -55°C to +125°C
- Operating Junction Temperature Range(SS15E~110E): -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 28°C/W Junction to Lead
- Maximum Thermal Resistance: 90°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SS12E	SS12	20V	14V	20V
SS13E	SS13	30V	21V	30V
SS14E	SS14	40V	28V	40V
SS15E	SS15	50V	35V	50V
SS16E	SS16	60V	42V	60V
SS18E	SS18	80V	56V	80V
SS110E	SS110	100V	70V	100V

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

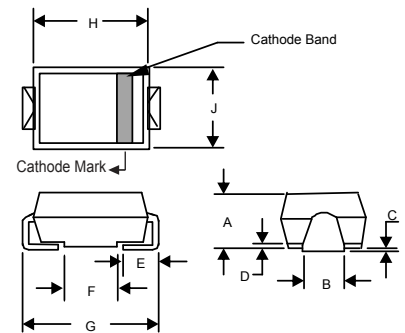
Average Forward Current	$I_{F(AV)}$	1.0A	$T_L=100^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	0.60V	$I_{FM}=1.0A;$ $T_J=25^\circ\text{C}^*$
SS12E-SS14E		0.70V	
SS15E-SS16E		0.85V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	0.1mA	$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$
SS12E-SS14E		10mA	
SS15E-SS16E		5mA	
	$I_R$	10µA	$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$
SS18E-SS110E		2mA	
Typical Junction Capacitance	$C_J$	110pF	Measured at 1.0MHz $V_R=4.0V$
SS12E-SS16E		30pF	
SS18E-SS110E			

\*Pulse Test: Pulse width 300 µsec, Duty cycle 2%

Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

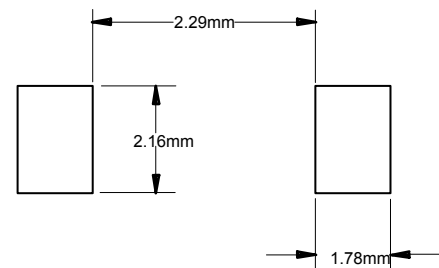
**1.0 Amp  
Schottky Rectifier  
20 to 100 Volts**

**SMAE**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.096	2.01	2.44	
B	0.045	0.071	1.15	1.80	
C	0.002	0.008	0.05	0.20	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.084	1.65	2.13	
G	0.189	0.208	4.80	5.30	
H	0.157	0.180	4.00	4.57	
J	0.090	0.115	2.29	2.92	

**Suggested Solder Pad Layout**



## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

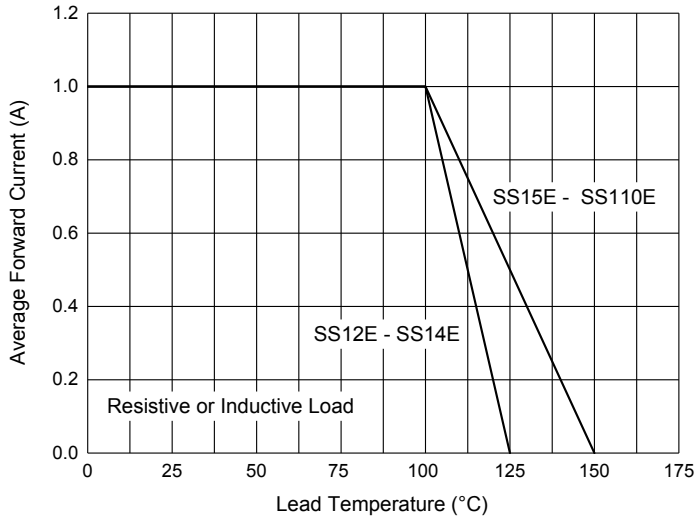


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

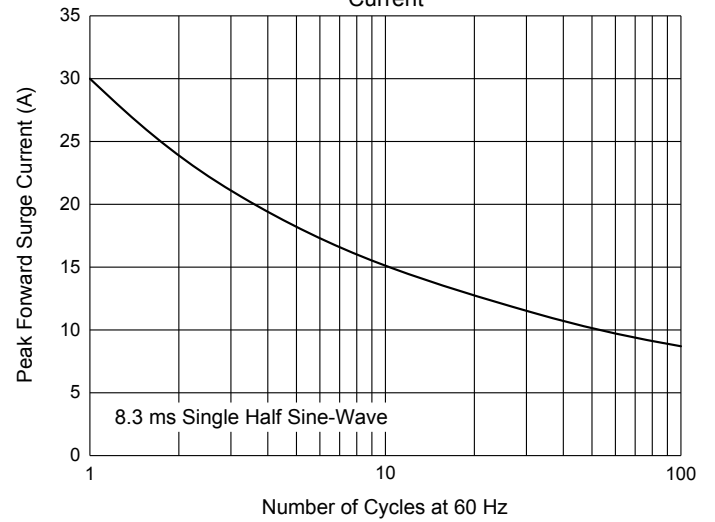


Fig. 3 - Typical Instantaneous Forward Characteristics

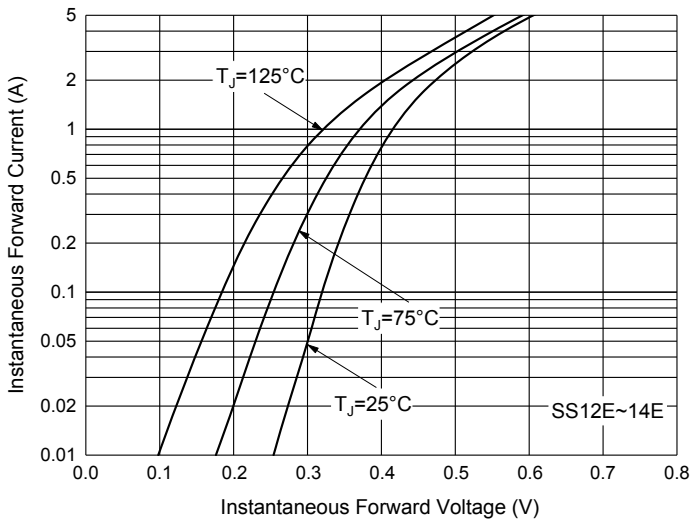


Fig. 4 - Typical Instantaneous Forward Characteristics

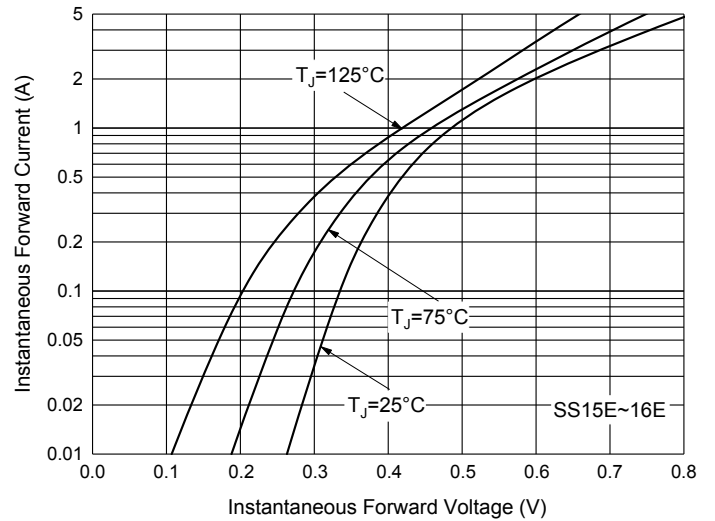


Fig. 5 - Typical Instantaneous Forward Characteristics

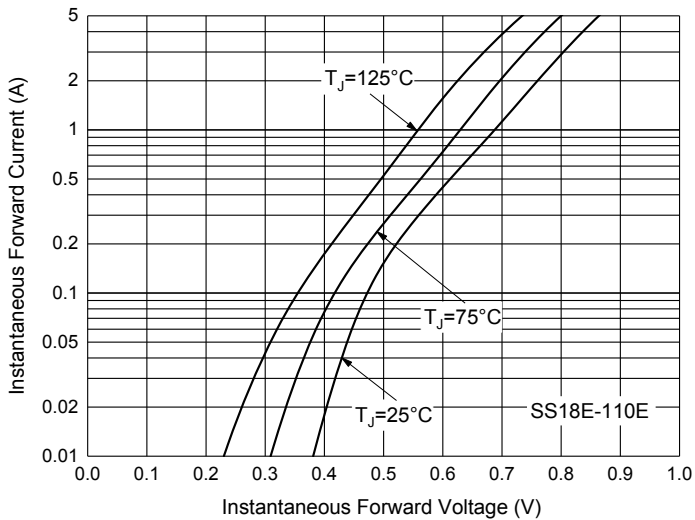
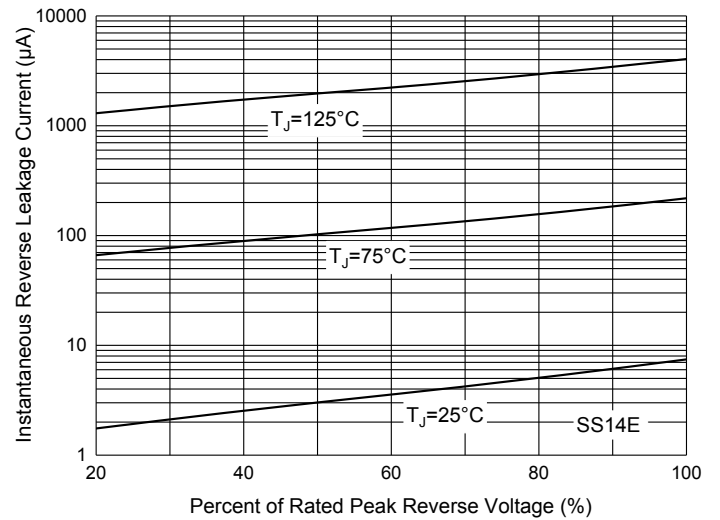


Fig. 6 - Typical Reverse Leakage Characteristics



## Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

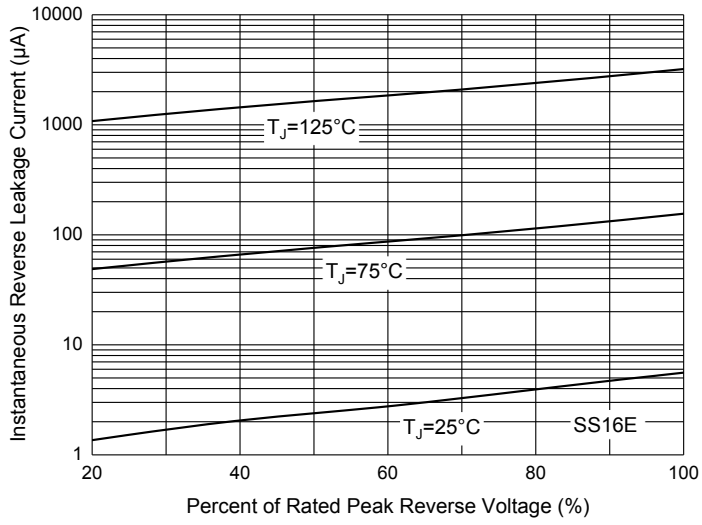
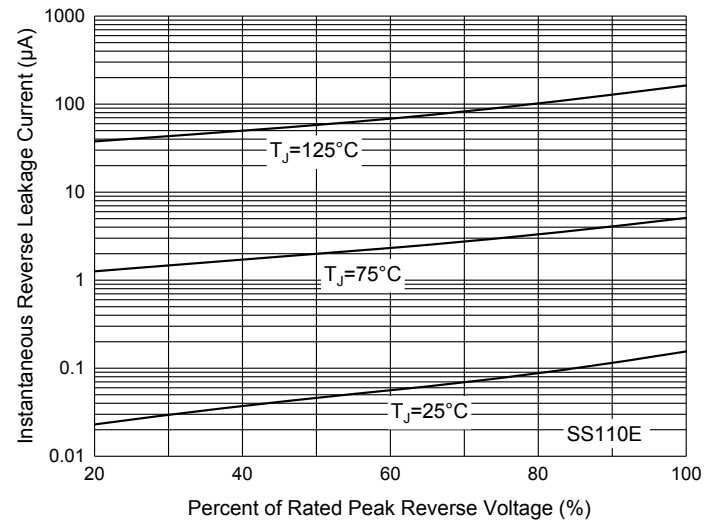


Fig. 8 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 6Kpcs/Reel

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. **Micro Commercial Components Corp.** products are sold subject to the general terms and conditions of commercial sale, as published at <https://www.mccsemi.com/Home/TermsAndConditions>.

### \*\*\*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.