



Micro Commercial Components

Micro Commercial Components
 20736 Marilla Street Chatsworth
 CA 91311
 Phone: (818) 701-4933
 Fax: (818) 701-4939

US1A THRU US1M

Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Glass Passivated Chip
- Ultra Fast Switching For High Efficiency
- For Surface Mounted Applications
- Low Forward Voltage Drop And High Current Capability
- Low Reverse Leakage Current
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
US1A	US1A	50V	35V	50V
US1B	US1B	100V	70V	100V
US1C	US1C	150V	105V	150V
US1D	US1D	200V	140V	200V
US1G	US1G	400V	280V	400V
US1J	US1J	600V	420V	600V
US1K	US1K	800V	560V	800V
US1M	US1M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

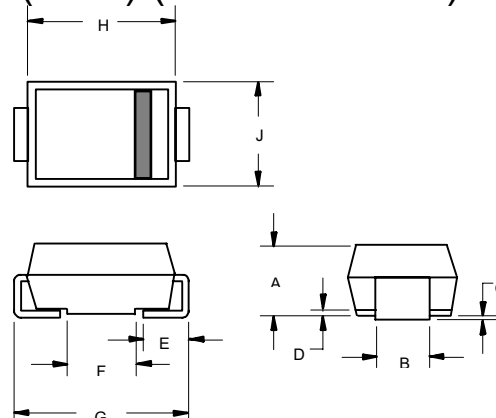
Average Forward Current	$I_{F(AV)}$	1.0A	$T_L = 75^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V 1.4V 1.7V	$I_{FM} = 1.0A$; $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10uA 100uA	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$
Maximum Reverse Recovery Time	T_{rr}	50ns 100ns	$I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$
Typical Junction Capacitance	C_J	20pF 17pF	Measured at 1.0MHz, $V_R=4.0V$

*Pulse test: Pulse width 300 sec, Duty cycle 1%

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.

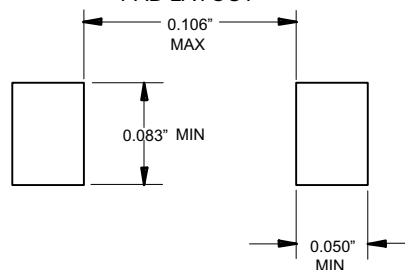
1 Amp Ultra Fast Rectifier 50 to 1000 Volts

DO-214AC (SMA) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.079	.096	2.00	2.44	
B	.050	.064	1.27	1.63	
C	.002	.008	.05	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.091	1.65	2.32	
G	.189	.220	4.80	5.59	
H	.157	.181	4.00	4.60	
J	.090	.115	2.25	2.92	

SUGGESTED SOLDER PAD LAYOUT



US1A thru US1M

Figure 1
Typical Forward Characteristics

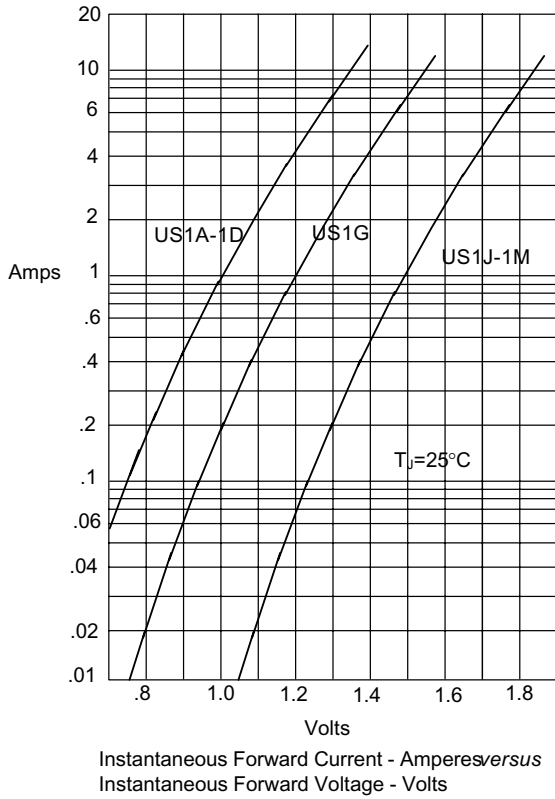


Figure 2
Forward Derating Curve

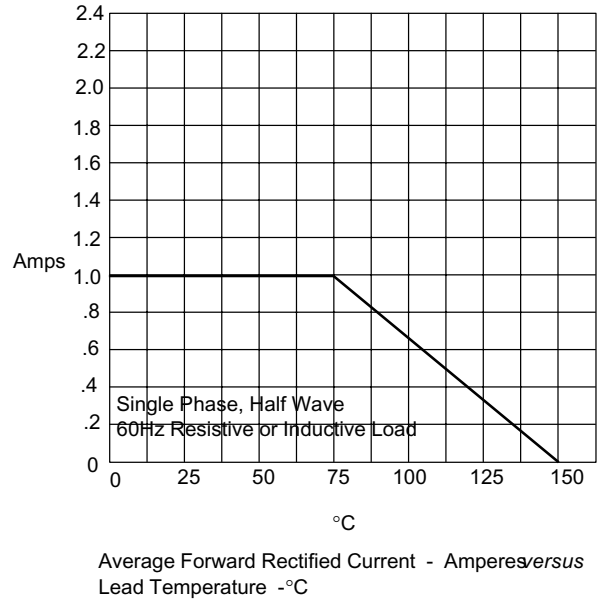
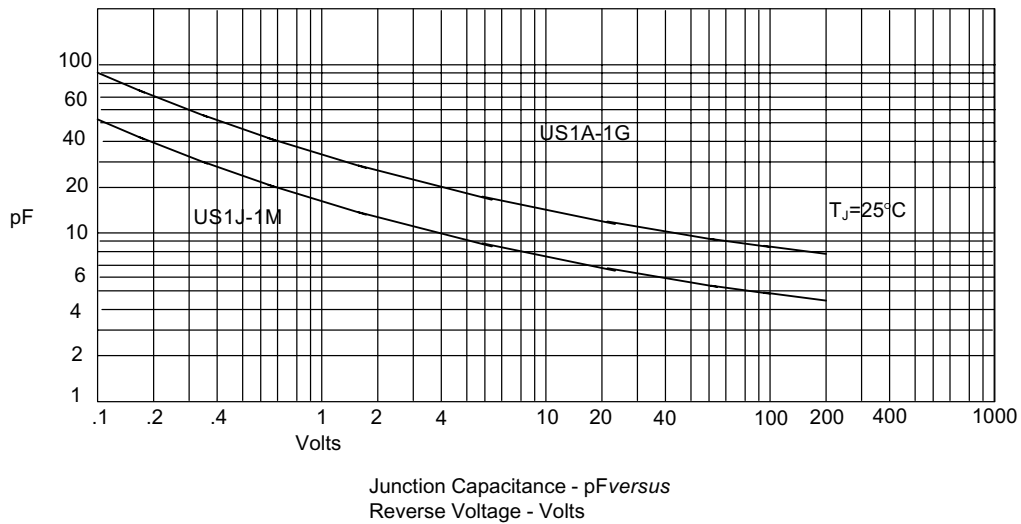


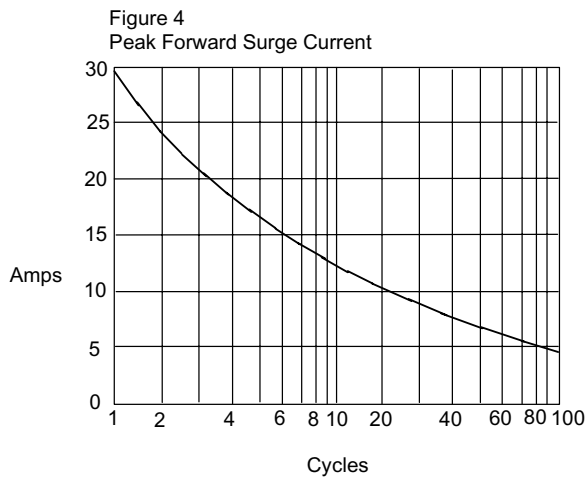
Figure 3
Junction Capacitance



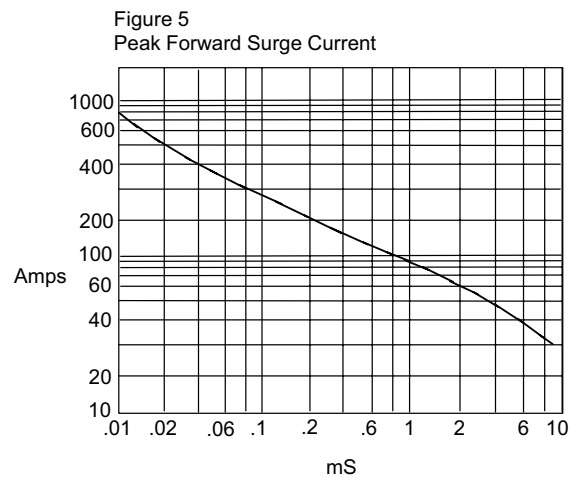
US1A thru US1M



Micro Commercial Components

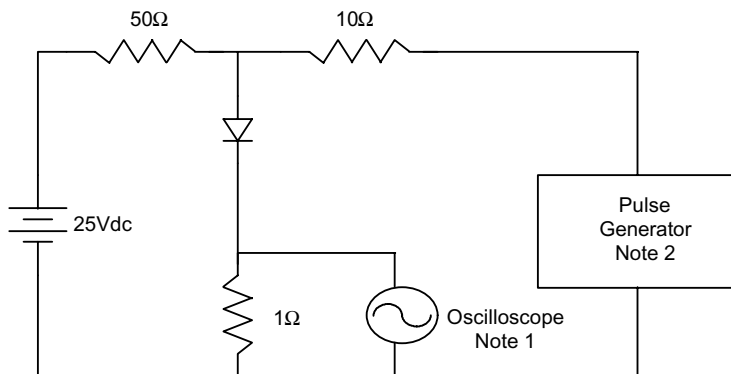


Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

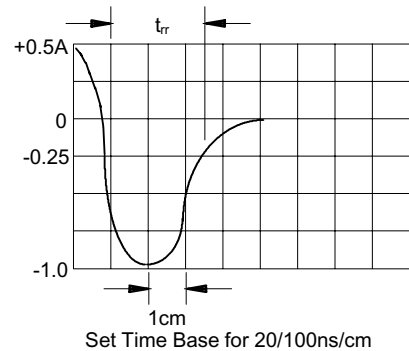


Peak Forward Surge Current - Amperes versus Pulse Duration - Milliseconds (mS)

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



- Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
 2. Rise Time = 10ns max.
Source impedance = 50 ohms
 3. Resistors are non-inductive





TM

Micro Commercial Components

Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;5Kpcs/Reel

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.

APPLICATIONS DISCLAIMER

Products offer by *Micro Commercial Components Corp.* are not intended for use in Medical, Aerospace or Military Applications.

www.mccsemi.com