

US2A THRU US2M

2 Amp Ultra Fast Rectifier 50 to 1000 Volts

Features

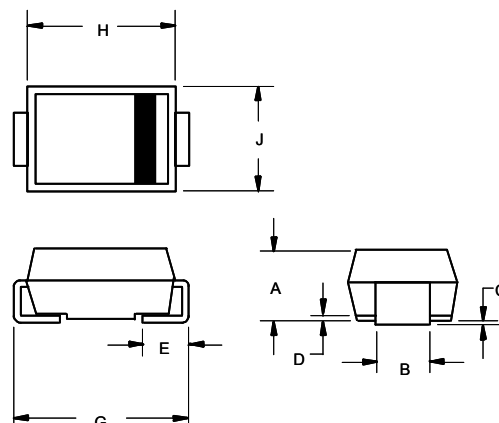
- Halogen free available upon request by adding suffix "-HF"
- Glass Passivated Chip
- Super Fast Switching For High Efficiency
- Low Forward Voltage Drop And High Current Capability
- Low Reverse Leakage Current
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 20°C/W Junction To Lead

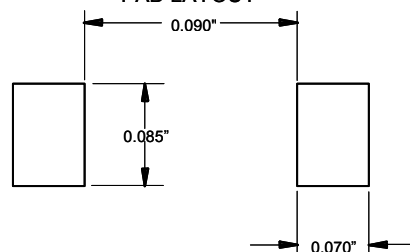
MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
US2A	US2A	50V	35V	50V
US2B	US2B	100V	70V	100V
US2C	US2C	150V	105V	150V
US2D	US2D	200V	140V	200V
US2G	US2G	400V	280V	400V
US2J	US2J	600V	420V	600V
US2K	US2K	800V	560V	800V
US2M	US2M	1000V	700V	1000V

DO-214AA (SMB) (Lead Frame)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.075	.095	1.91	2.41	
B	.077	.083	1.96	2.10	
C	.002	.008	.05	.20	
D	—	.02	—	.51	
E	.030	.060	.76	1.52	
G	.200	.220	5.08	5.59	
H	.160	.187	4.06	4.75	
J	.130	.155	3.30	3.94	

SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics @ 25°C Unless Otherwise Specified

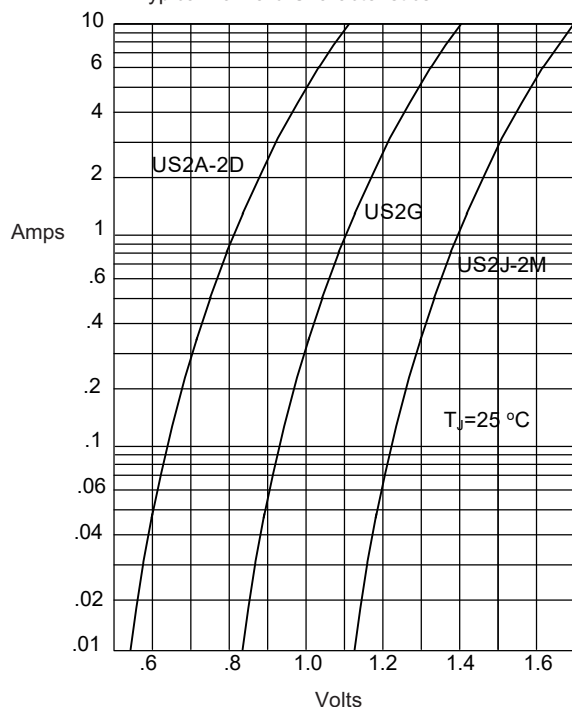
Average Forward Current	$I_{F(AV)}$	2.0A	$T_L = 110^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine
Maximum Instantaneous Forward Voltage US2A-2D US2G US2J-2M	V_F	1.0V 1.4V 1.65V	$I_{FM} = 2.0A$; $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5 μA 200 μA (Max) 16 μA (Typ.)	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Maximum Reverse Recovery Time US2A-2G US2J-2M	T_{rr}	50ns 75ns	$I_F = 0.5A$, $I_R = 1.0A$, $I_{rr} = 0.25A$
Typical Junction Capacitance	C_J	28pF	Measured at 1.0MHz, $V_R = 4.0V$

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

Note:1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.

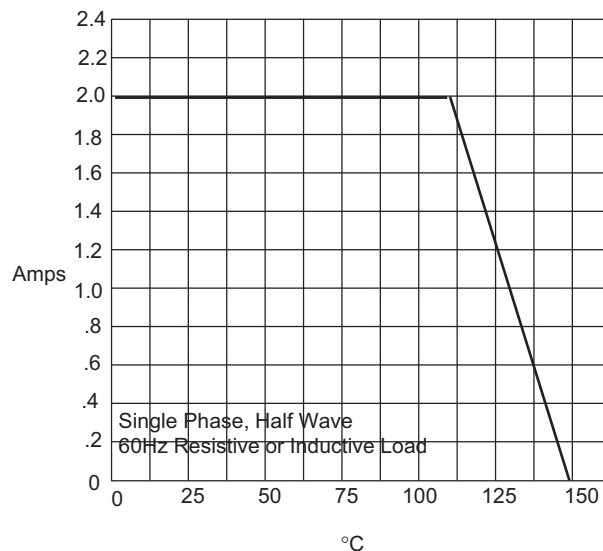
US2A thru US2M

Figure 1
Typical Forward Characteristics



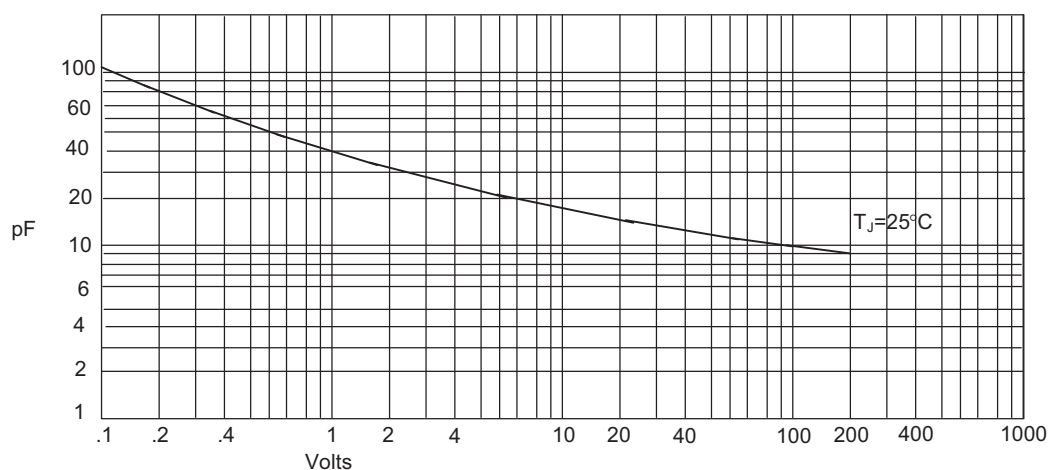
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



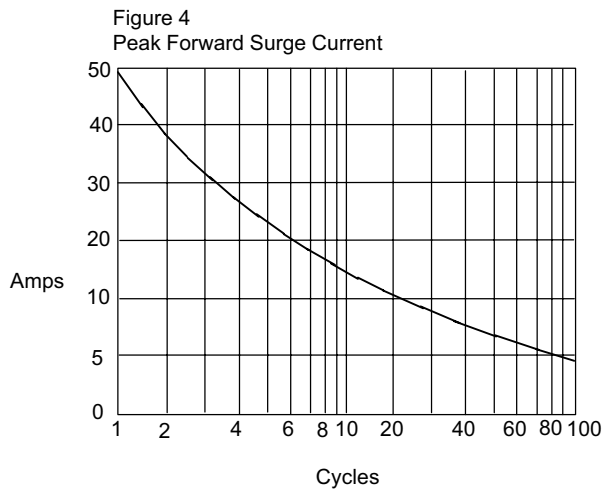
Average Forward Rectified Current - Amperes versus
Lead Temperature - $^\circ\text{C}$

Figure 3
Junction Capacitance



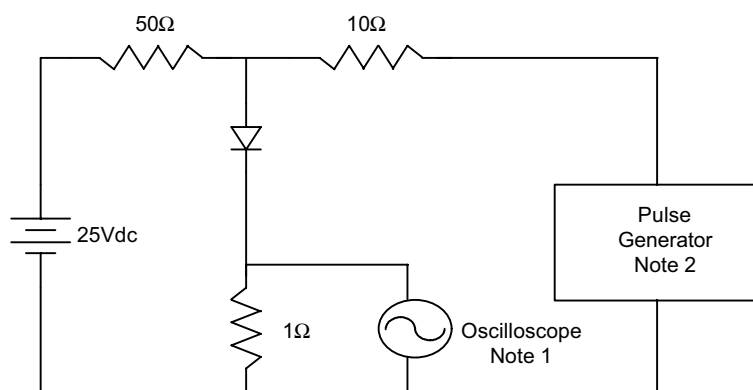
Junction Capacitance - pF versus
Reverse Voltage - Volts

US2A thru US2M



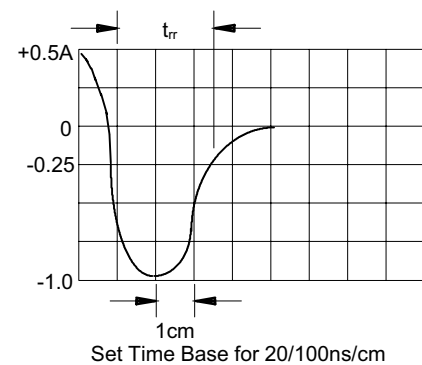
Peak Forward Surge Current - Amperes versus
Number Of Cycles At 60Hz - Cycles

Figure 5
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



Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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

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