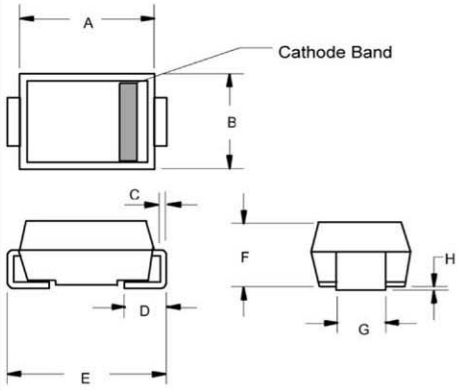
US2A THRU US2M

Features

- 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)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1

2 Amp Ultra Fast Rectifier
50 to 1000 Volts

DO-214AA
(SMB) (LEAD FRAME)



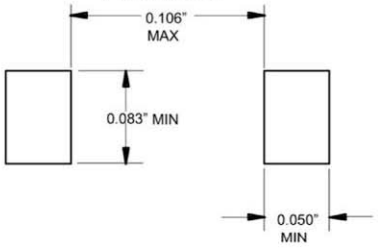
Maximum Ratings

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

Part 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

DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.160	.180	4.06	4.57	
B	.130	.155	3.30	3.94	
C	.006	.012	0.15	0.31	
D	.030	.060	0.76	1.52	
E	.205	.220	5.21	5.59	
F	.079	.103	2.01	2.62	
G	.077	.087	1.96	2.21	
H	.002	.008	0.05	0.20	

SUGGESTED SOLDER PAD LAYOUT

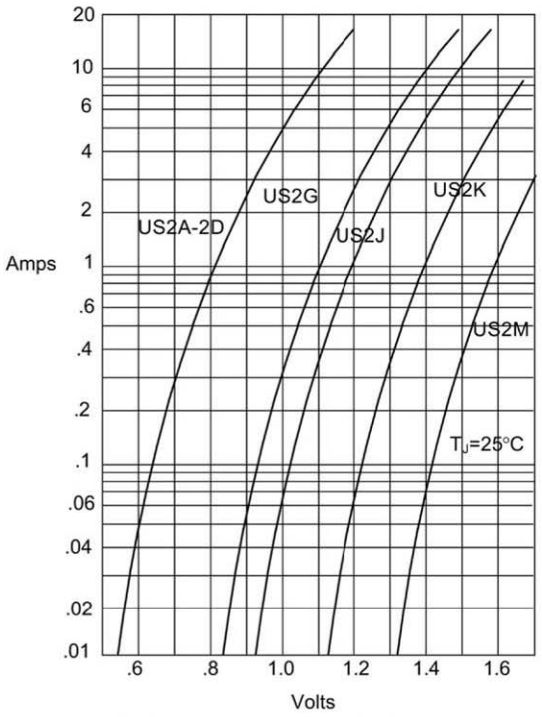


Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2.0A	T_L = 110°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 1.7V	I_{FM} = 2.0A; T_J = 25°C
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5uA 350uA	T_J = 25°C T_J = 125°C
Maximum Reverse Recovery Time US2A-2G US2J-2M	T_{rr}	50ns 100ns	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

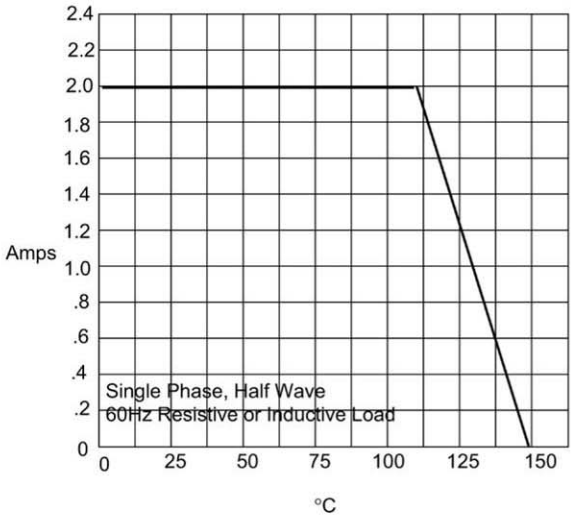
*Pulse test: Pulse width 300 μsec, Duty cycle 1%
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

Figure 1
Typical Forward Characteristics



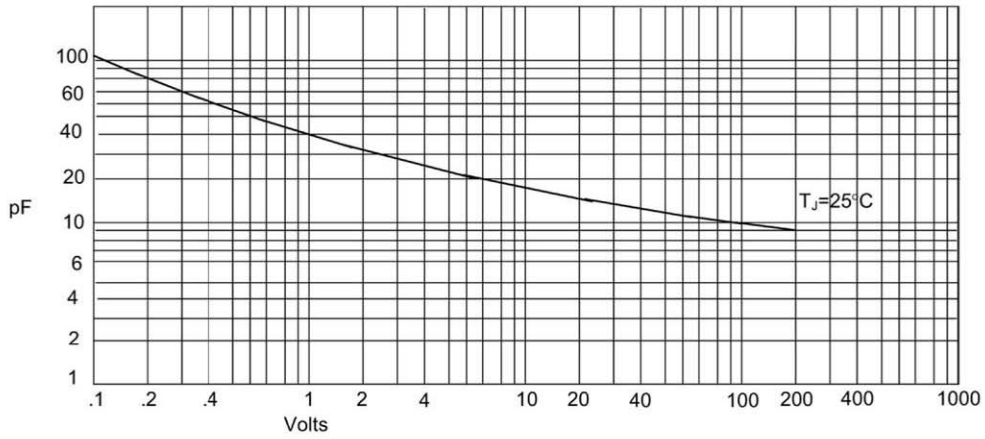
Instantaneous Forward Current - Amperes*versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



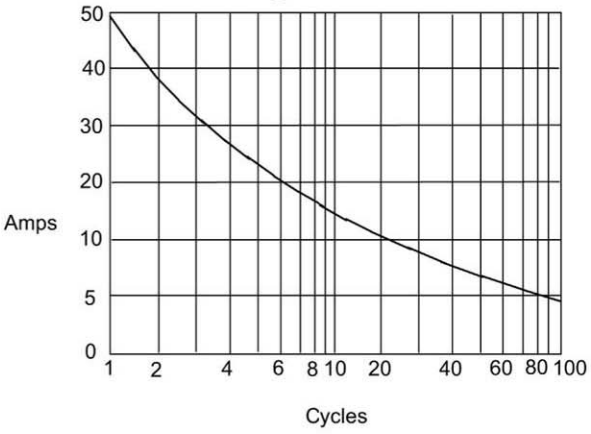
Average Forward Rectified Current - Amperes*versus*
Lead Temperature -°C

Figure 3
Junction Capacitance



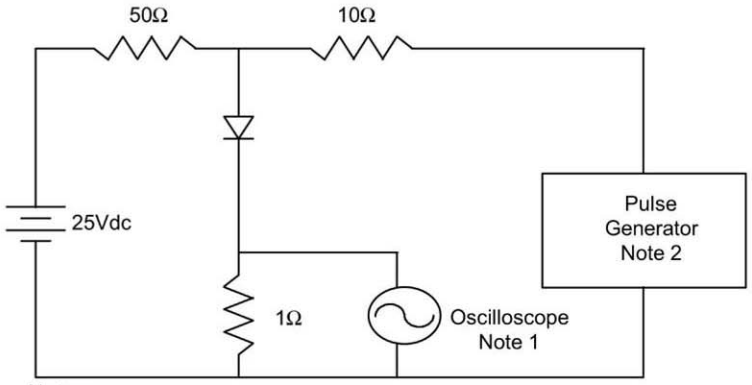
Junction Capacitance - pF*versus*
Reverse Voltage - Volts

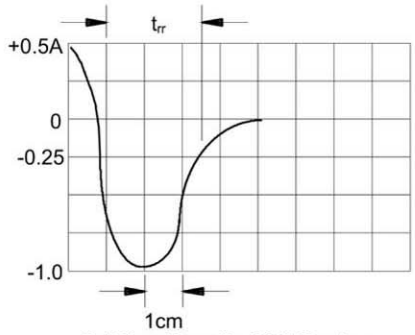
Figure 4
Peak Forward Surge Current



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

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/cm

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