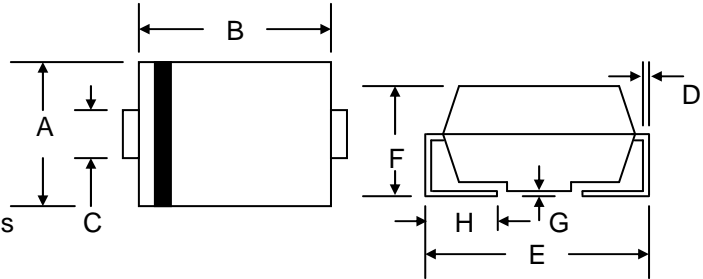


Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 30A Peak
- Low Power Loss
- Ultra-Fast Recovery Time
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes



Mechanical Data

- Case: SMA/DO-214AC, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**

SMA/DO-214AC		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.90
D	0.152	0.305
E	4.80	5.30
F	2.00	2.44
G	0.051	0.203
H	0.76	1.52
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_L = 110^\circ\text{C}$	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	1.0		1.3		1.7		V	
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}	10 50							μA
Reverse Recovery Time (Note 1)	t_{rr}	50				75			nS
Typical Junction Capacitance (Note 2)	C_J	20				15			pF
Thermal Resistance Junction to Ambient (Note 3)	R_{JA}	75							$^\circ\text{C/W}$
Thermal Resistance Junction to Lead (Note 3)	R_{JL}	27							
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

- Note: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
 3. Mounted on PCB with 5.0mm x 5.0mm copper pads.

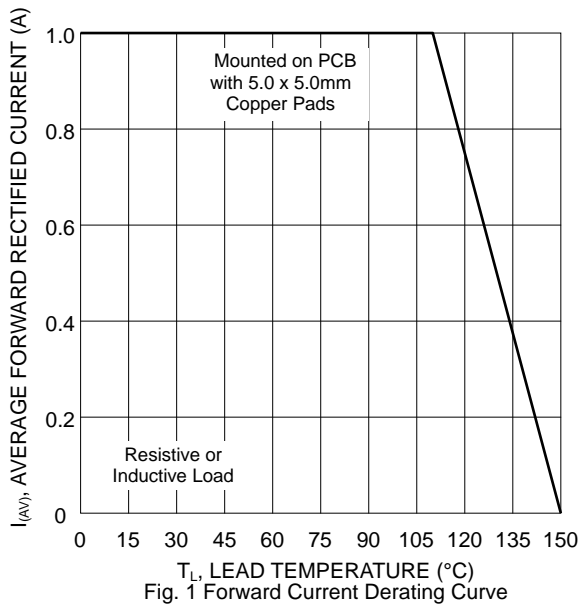


Fig. 1 Forward Current Derating Curve

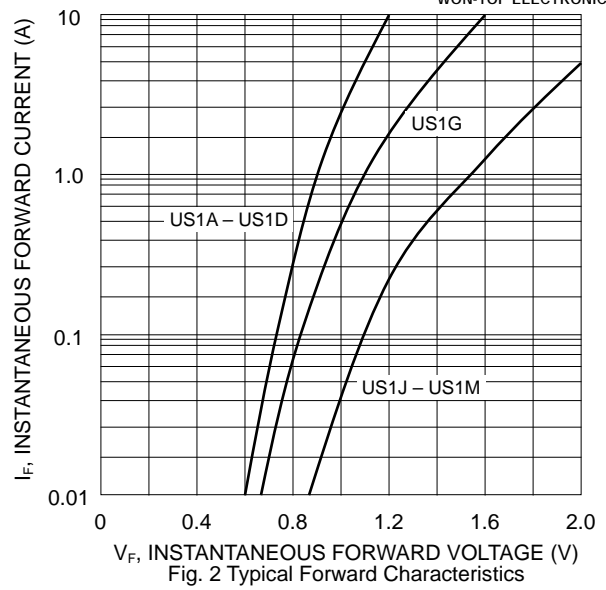


Fig. 2 Typical Forward Characteristics

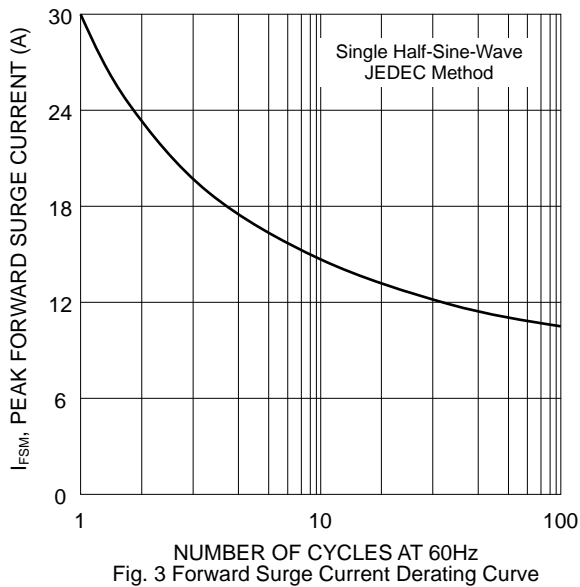


Fig. 3 Forward Surge Current Derating Curve

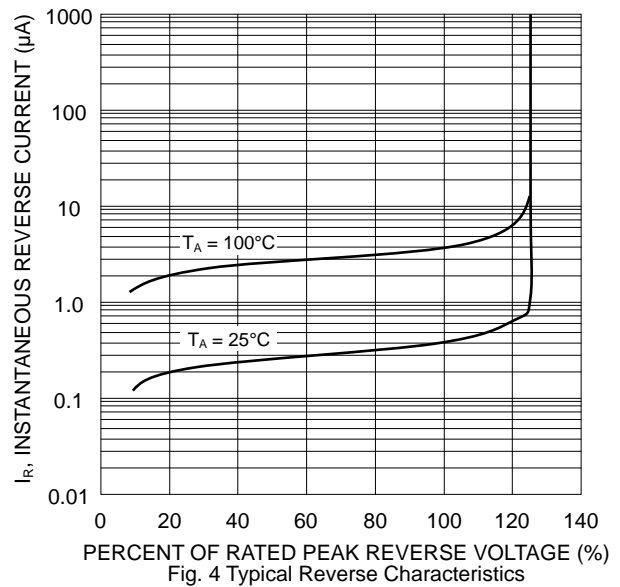


Fig. 4 Typical Reverse Characteristics

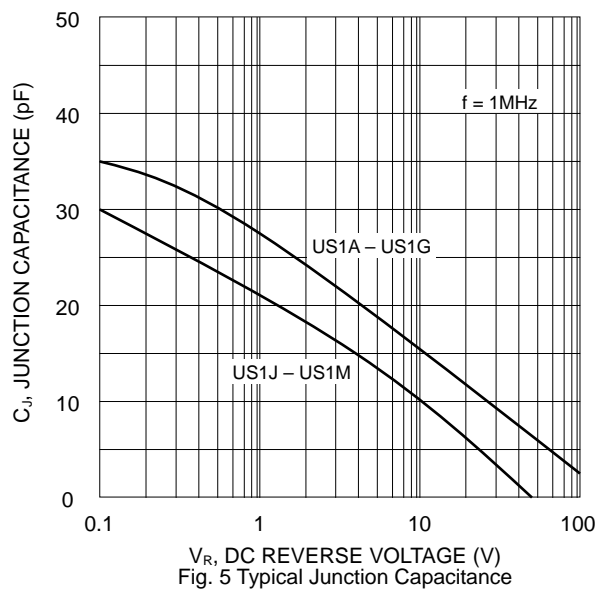
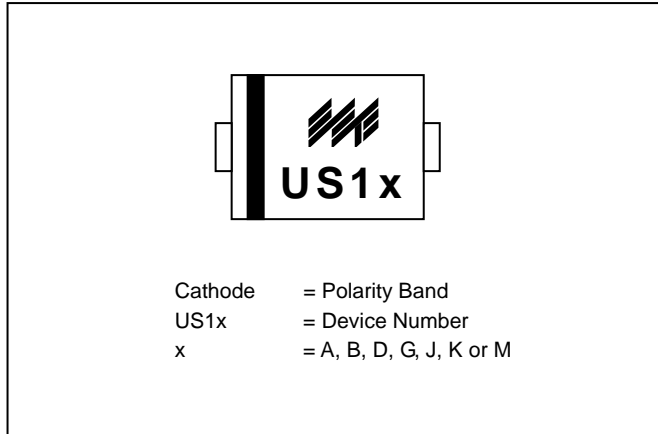
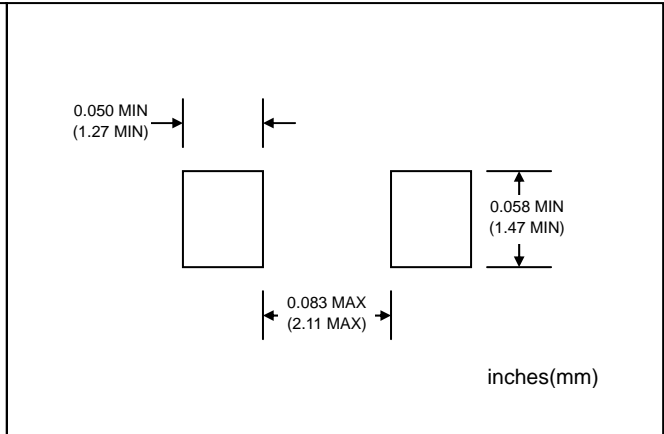


Fig. 5 Typical Junction Capacitance

MARKING INFORMATION

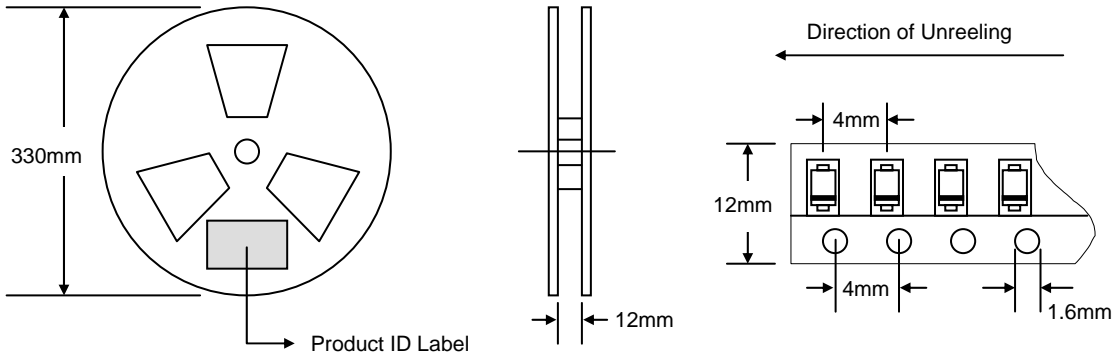


RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	5,000	340 x 337 x 45	10,000	370 x 370 x 420	80,000	14.0

Note: 1. Paper reel, white or gray color.
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
US1A-T3	SMA	5000/Tape & Reel
US1B-T3	SMA	5000/Tape & Reel
US1D-T3	SMA	5000/Tape & Reel
US1G-T3	SMA	5000/Tape & Reel
US1J-T3	SMA	5000/Tape & Reel
US1K-T3	SMA	5000/Tape & Reel
US1M-T3	SMA	5000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, US1A-T3-LF.**

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