

Ultrafast Recovery Rectifier 1A 50~1000V SMA

US1x series

MERITEK

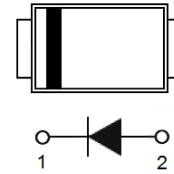
FEATURES

- Glass Passivated Die Construction
- Ultrafast recovery Time for High Efficiency
- Low profile package
- Built in strain relief



MECHANICAL DATA

- Case: DO-214AC SMA, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Band Marking denotes Cathode end



ELECTRICAL CHARACTERISTICS

Parameter	Symbol	1A	1B	1D	1G	1J	1K	1M	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, $T_L=75^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current, 8.3ms single half Sine wave superimposed on rated load	I_{FSM}	30							Amp
Maximum Forward Voltage at 1.0A	V_F	1.0		1.3		1.7		Volts	
Maximum Reverse Current at Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$	5							μAmp
	$T_J=125^\circ\text{C}$	200							μAmp
Typical Junction Capacitance	C_J	15				10			pF
Typical Terminal Resistance	$R_{\theta JA}$	30							$^\circ\text{C/W}$
Maximum Reverse Recovery Time	T_{RR}	50				75			ns
Operating Junction and Storage Temperature	T_J, T_{stg}	-65 to +150							$^\circ\text{C}$

Notes:

1. Rating at 25°C ambient temperature unless otherwise specified.
2. Single phase, half wave, 60hz, resistive or inductive load, for capacitive load, derate current by 20%.
3. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
4. Thermal resistance from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas
5. Reverse Recovery Test Conditions : $I_F=0.5A \cdot I_R=1A \cdot I_{RR}=0.25A$.

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CHARACTERISTIC CURVES

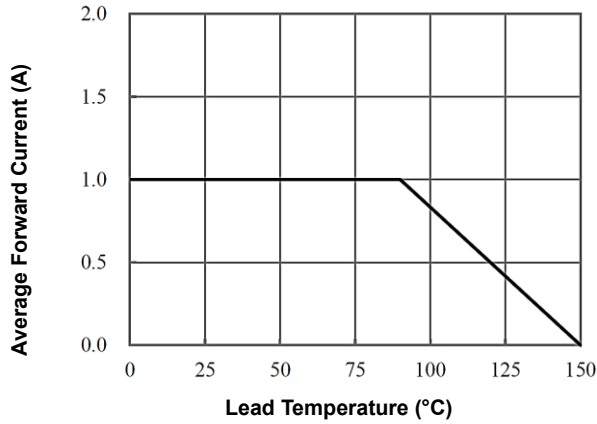


Fig1. Maximum Forward Current Derating Curve

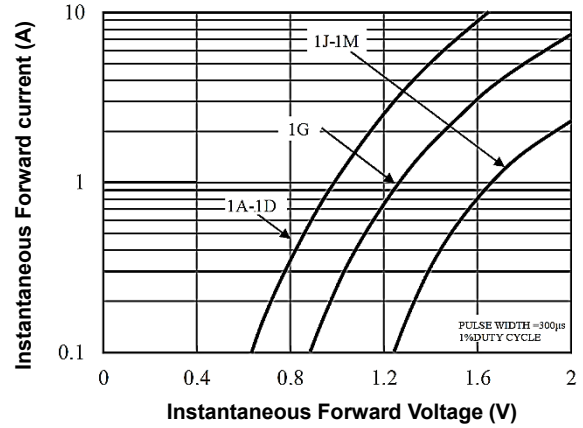


Fig2. Typical Instantaneous Forward Characteristics

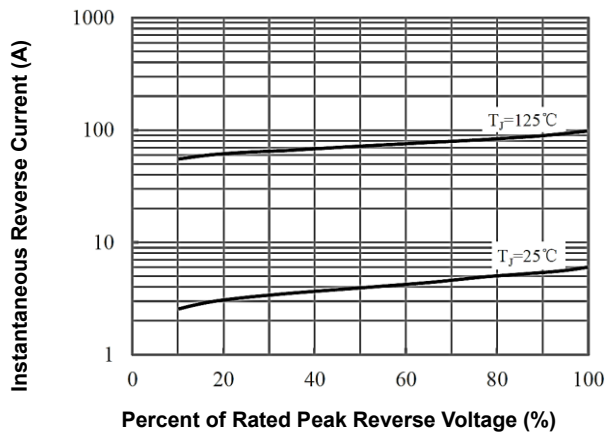


Fig3. Typical Reverse Characteristic

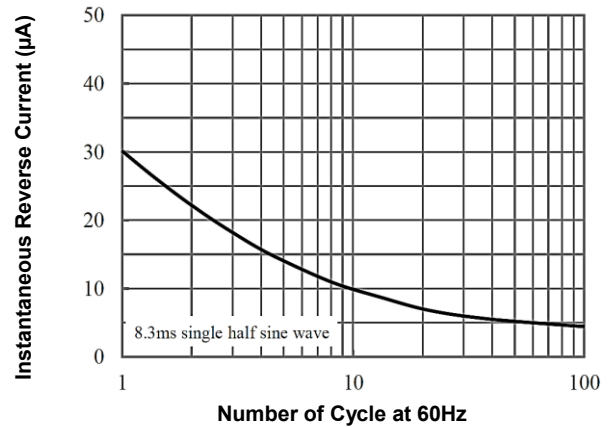
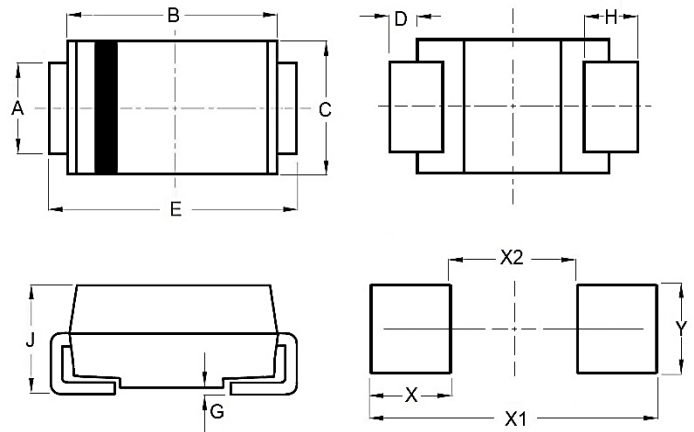


Fig4. Maximum Non-Repetitive Surge Current

DIMENSIONS

Item	DO-214AC (SMA)	
	Min (mm)	Max (mm)
A	1.25	1.70
B	4.00	4.70
C	2.18	2.90
D	0.152	0.305
E	4.70	5.31
G	0.102	0.203
H	0.76	1.55
J	0.170	2.43
X	2.07	
X1	5.80	
X2	1.66	
Y	2.06	



*Specifications subject to change without notice