US1AG THRU US1MG

SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 V

Forward Current - 1 A

FEATURES
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA
- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 0.002oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Top View
Marking Code: US1AG~US1MG
Simplified outline SMA and symbol

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	US1AG	US1BG	US1DG	US1GG	US1JG	US1KG	US1MG	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_c = 125 °C	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.0			1.3	1.65			V
Maximum DC Reverse Current T_a = 25 °C at Rated DC Blocking Voltage T_a =125 °C	I_R	5 100							μA
Maximum Reverse Recovery Time (1)	t_{rr}	50				75			ns
Typical Thermal Resistance (2)	$R_{\theta JA}$	75							°C/W
Typical Junction Capacitance (3)	C_j	15							pF
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

(1) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A.
(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.
(3) Measured at 1 MHz and applied reverse voltage of 4 V D.C

Fig.1 Forward Current Derating Curve

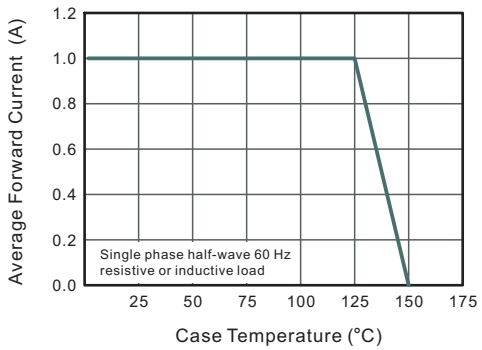


Fig.2 Typical Reverse Characteristics

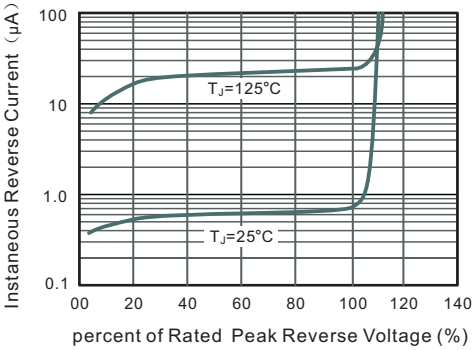


Fig.3 Typical Forward Characteristics

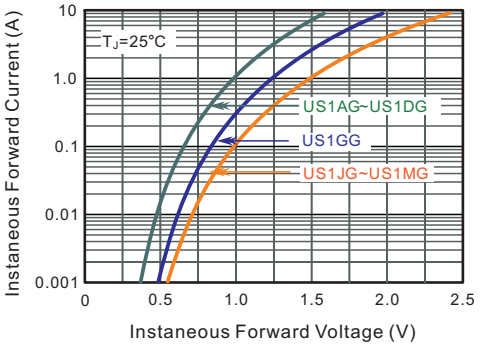


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current

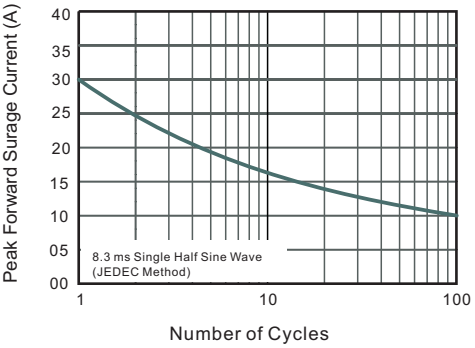


Fig.5- Typical Transient Thermal Impedance

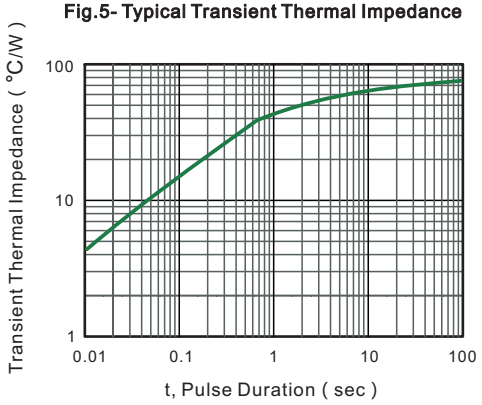
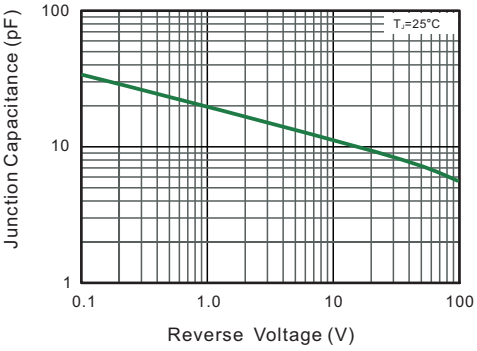


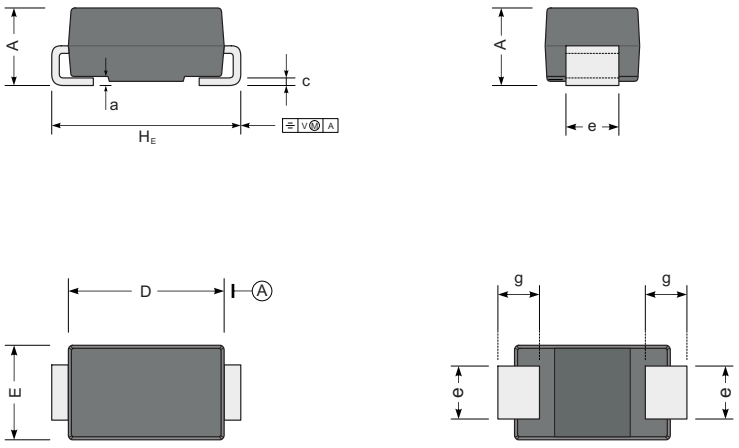
Fig.6 Typical Junction Capacitance



PACKAGE OUTLINE

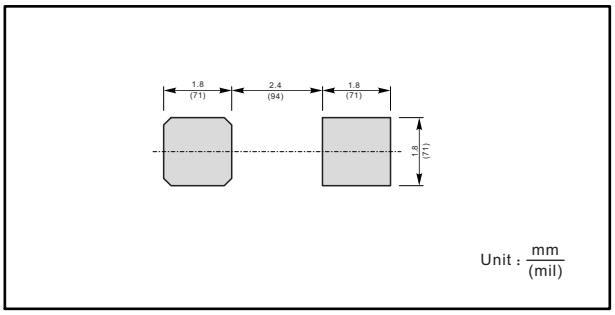
Plastic surface mounted package; 2 leads

SMA



UNIT		A	D	E	H_E	c	e	g	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	
mil	max	87	181	106	205	12	63	59	12
	min	75	157	91	185	6	51	35	

The recommended mounting pad size



Marking

Type number	Marking code
US1AG	US1A
US1BG	US1B
US1DG	US1D
US1GG	US1G
US1JG	US1J
US1KG	US1K
US1MG	US1M

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