

Description

The US1A-US1M Surface Mount Superfast Recovery Rectifier, Reverse Voltage:50 to 1000V, Forward Current:1.0A, SMA package.

Features

- Glass Passivated Chip Junction
- High efficiency
- Lead free in comply with EU ROHS 2011/65/EU directives.
- For surface mounted applications
- Halogen free product.

Applications

- General purpose

Equivalent Circuit

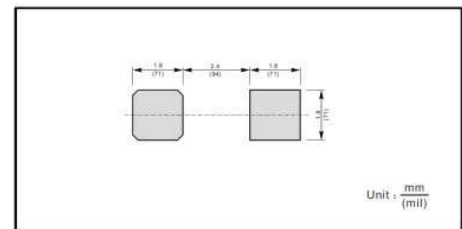


Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



Marking

- See Marking Instructions.

Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating							Unit
		US1A	US1B	US1D	US1G	US1J	US1K	US1M	
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)}	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	30							A
Typical Thermal Resistance ⁽¹⁾	R _{θJA}	75							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55~+150							°C

Note:

(1) P.C.B. mounted with 2.0 X 2.0" (5 X 5 cm) copper pad areass .

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test condition	Rating							Unit
			US1A	US1B	US1D	US1G	US1J	US1K	US1M	
Maximum Instantaneous Forward Voltage	V _F	I _F =1.0A	1.0			1.3	1.65			V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	I _R	T _a =25°C	5.0							uA
		T _a =125°C	100							
Maximum Reverse Recovery Time	T _{rr}	I _F =0.5A I _R =1.0A I _{rr} =0.25A	50				75			ns

Electrical Characteristic Curve

Fig.1 Forward Current Derating Curve

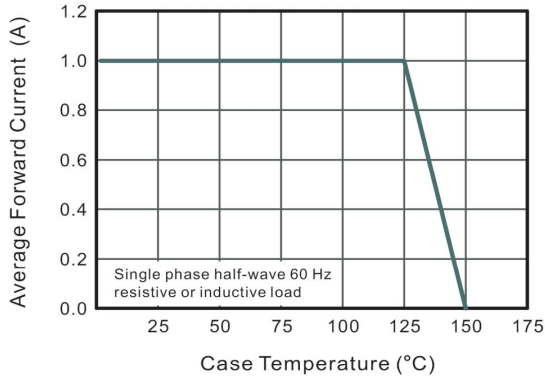


Fig.2 Typical Reverse Characteristics

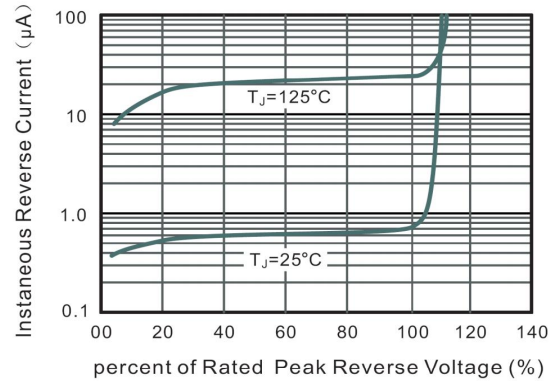


Fig.3 Typical Forward Characteristics

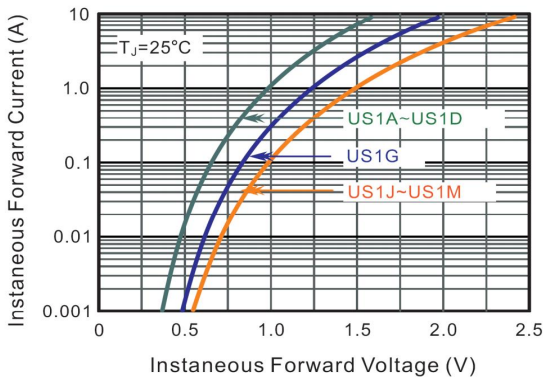


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

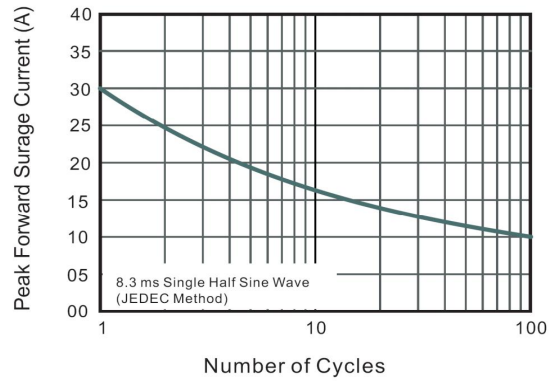


Fig.5- Typical Transient Thermal Impedance

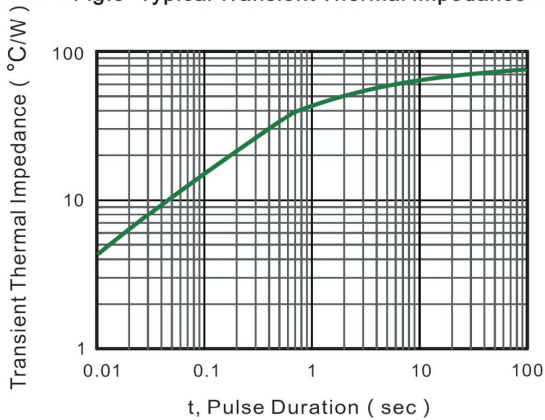
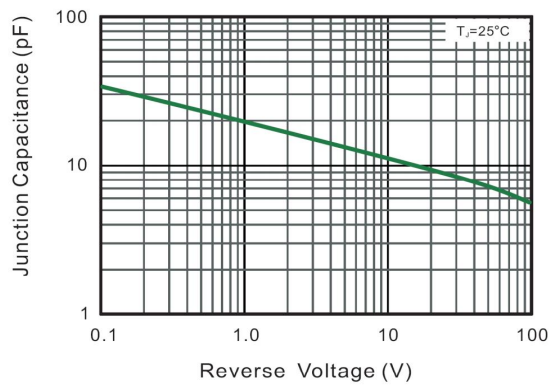


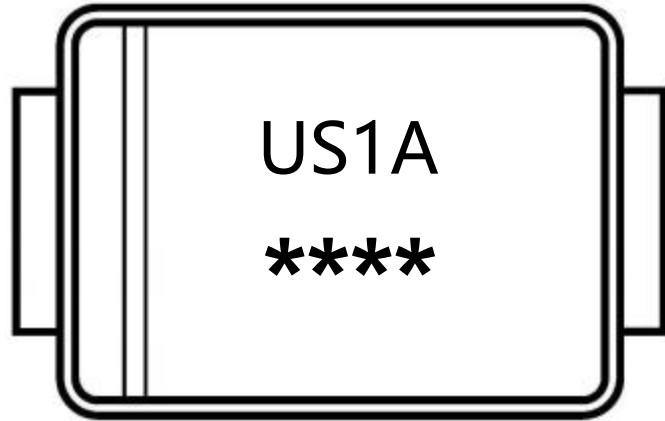
Fig.6 Typical Junction Capacitance



Marking instructions

Marking

Type number	Marking code
US1A	US1A
US1B	US1B
US1D	US1D
US1G	US1G
US1J	US1J
US1K	US1K
US1M	US1M



Note:

US1A : Product Type Code

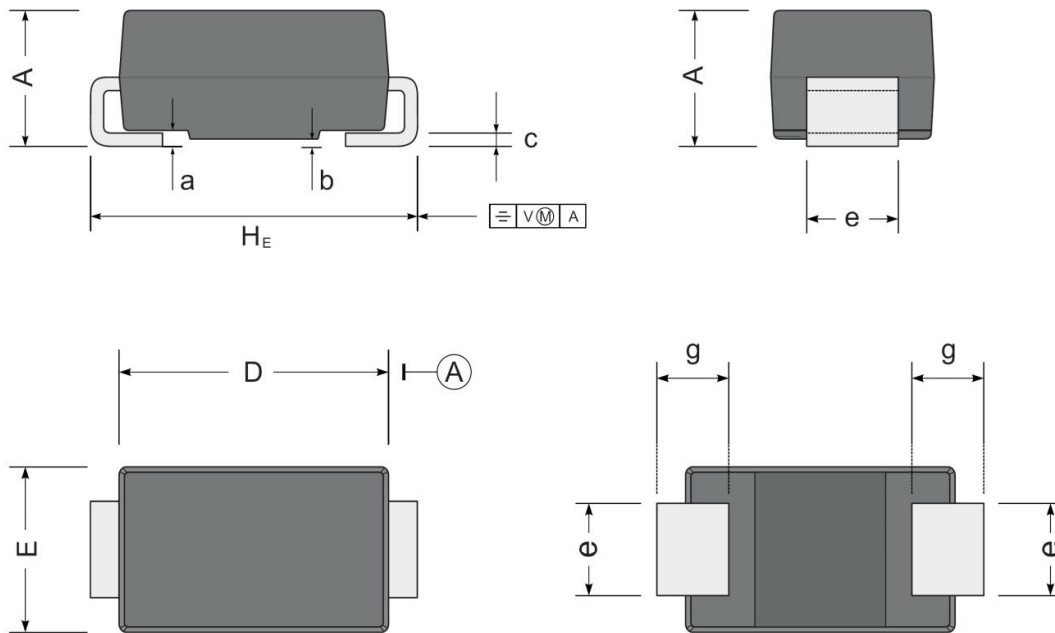
**** : Lot No. Code , The 1st * means:YM Code , The last 3 * means:little Lot No Code

Packaging SPEC.

Package Type	Units					Dimension (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SMA	5000	2	10000	7	70000	13" ×12	336X336X40	380X335X366

Package Dimensions

SMA



UNIT		A	D	E	H_E	c	e	g	b	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.2	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	0.05	
mil	max	87	181	106	205	12	63	59	7.9	12
	min	75	157	91	185	6	51	35	2	