US1A–TN~US1M–TN
Surface Mount Ultrafast Recovery Rectifiers

Features

- For surface mount applications
- Glass passivated chip junction
- Low profile package
- High efficiency
- Lead free in comply with EU RoHS 2011/65/EU directive

SMA

1.Cathode  2.Anode

Marking Code:

US1A–TN: US1A
US1B–TN: US1B
US1D–TN:US1D
US1G–TN: US1G
US1J–TN: US1J
US1K–TN: US1K
US1M–TN: US1M

Maximum Ratings and Electrical Characteristics

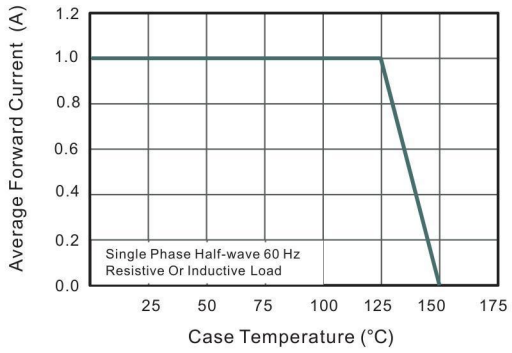
Ratings at 25℃ ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

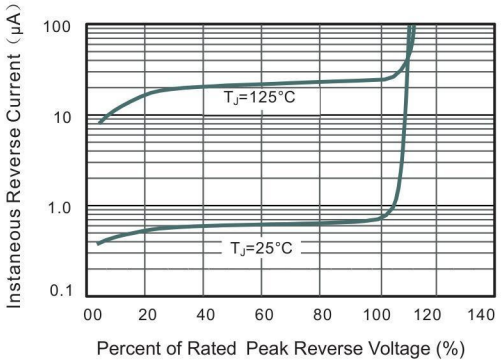
Parameter	Symbols	US1A–TN	US1B–TN	US1D–TN	US1G–TN	US1J–TN	US1K–TN	US1M–TN	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_C =125 °C	$I_{F(AV)}$	1.0							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 at Rated DC Blocking Voltage T_A = 25 °C T_A = 125 °C	I_R	5 100							μA
Typical Junction Capacitance Note1	C_j	15							pF
Typical Thermal Resistance Note2	$R_{\theta JA}$	75							°C/W
Maximum Reverse Recovery Time Note3	T_{rr}	50				75			nS
Junction Temperature	T_J	150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

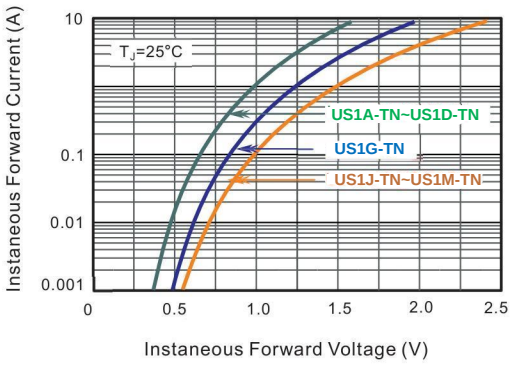
Note:

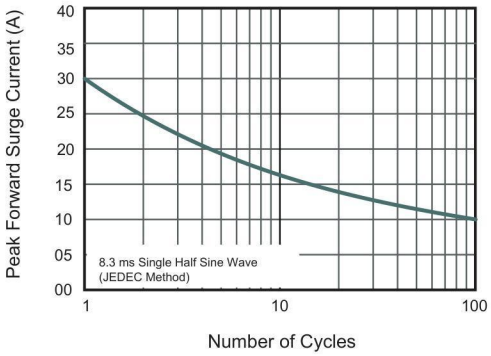
1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.
3. Measured with I_F=0.5A,I_R=1A ,I_{rr}=0.25A.

Typical Characteristic Curves





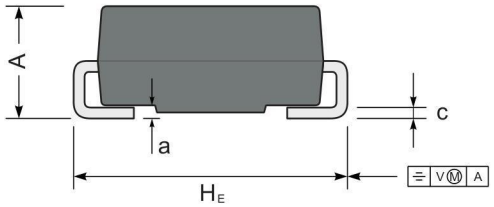


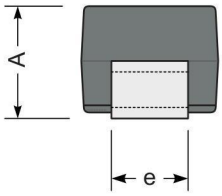


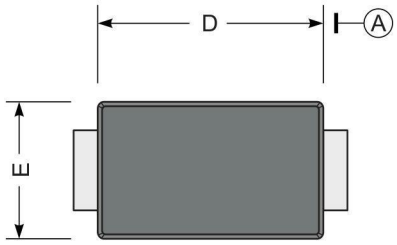
Package Outline

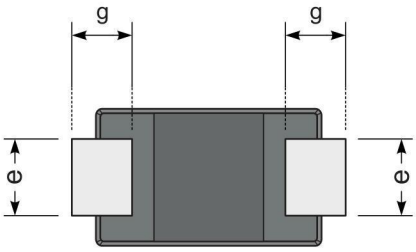
SMA

Dimensions in mm









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	