

## Surface Mount Ultrafast Recovery EPI Diode

Reverse Voltage – 600 V

Forward Current – 1.0 A

### FEATURES

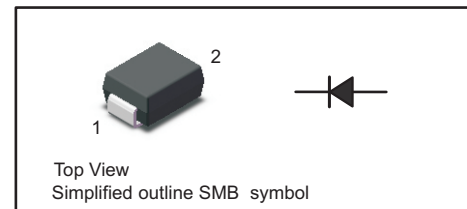
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency
- Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.095g / 0.003oz

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### 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	MURS1JB	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	600	V
Maximum RMS voltage	$V_{RMS}$	420	V
Maximum DC Blocking Voltage	$V_{DC}$	600	V
Maximum Average Forward Rectified Current @ Fig.1	$I_{F(AV)}$	1	A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30	A
Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	60	A
$I^2t$ Rating for fusing (3ms≤t≤8.3ms)	$I^2t$	3.7	A <sup>2</sup> S
Max Instantaneous Forward Voltage at 1 A	$V_F$	1.25	V
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	$I_R$	5 50	μA
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	16	pF
Maximum Reverse Recovery Time <sup>(2)</sup>	$t_{rr}$	50	ns
Typical Thermal Resistance <sup>(3)</sup>	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	43 9 18	°C/W
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

(3) P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.



Fig.1 Maximum Average Forward Current Rating

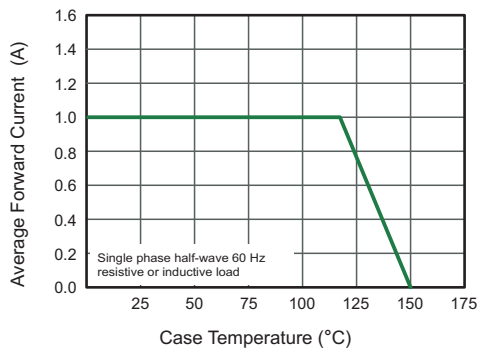


Fig.2 Typical Reverse Characteristics

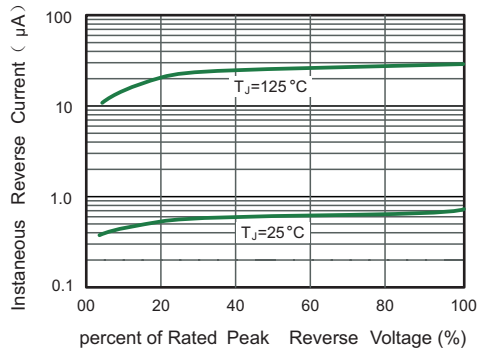


Fig.3 Typical Forward Characteristic

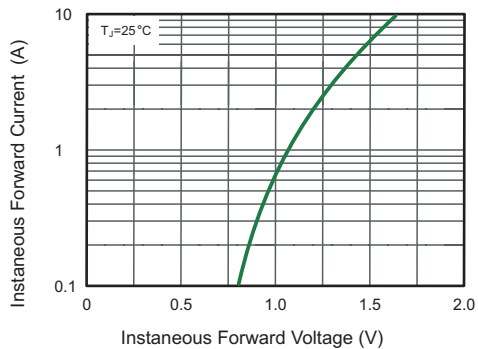


Fig.4 Typical Junction Capacitance

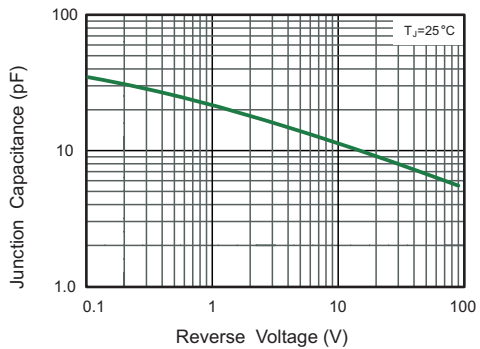
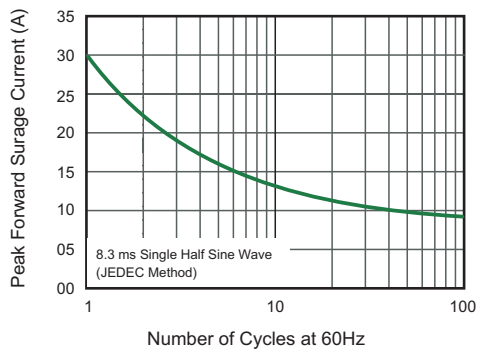


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

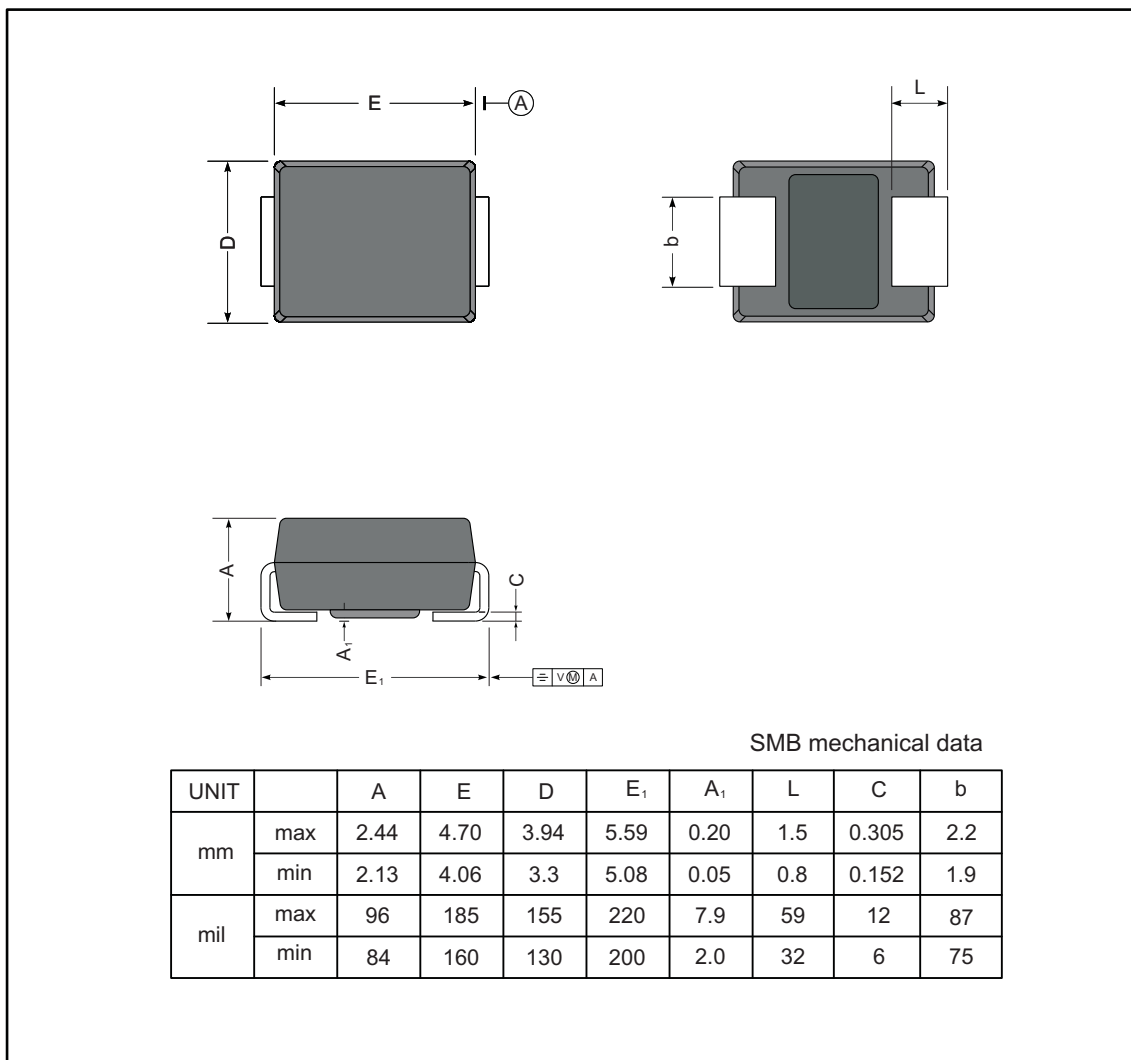




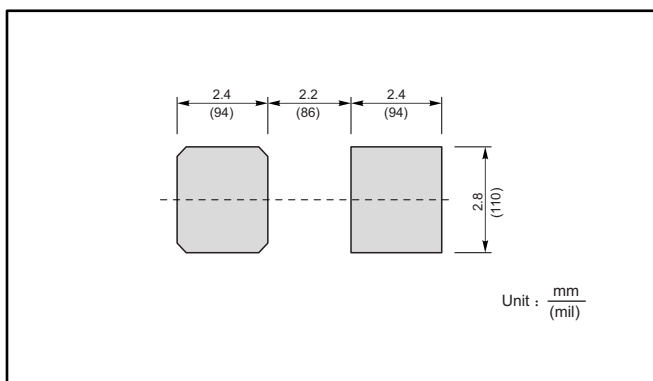
**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SMB



**The recommended mounting pad size**



**Marking**

Type number	Marking code
MURS1JB	MS1J



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