

Surface Mount Superfast Recovery Rectifier
Reverse Voltage – 50 to 600 V
Forward Current –2 A

FEATURES

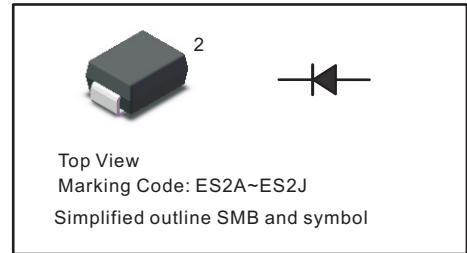
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

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



Absolute Maximum Ratings and Characteristics

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

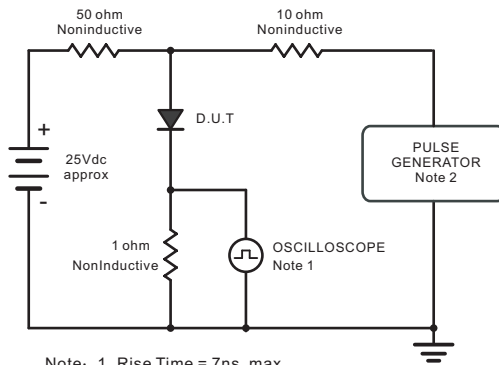
Parameter	Symbols	ES2AB	ES2BB	ES2CB	ES2DB	ES2EB	ES2GB	ES2JB	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at T _c = 125 °C	I _{F(AV)}	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	60							A
Maximum Forward Voltage at 2 A	V _F	1				1.25		1.68	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 at V _R =4V, f=1MHz	C _J	40							pF
Maximum Reverse Recovery Time ⁽¹⁾	t _{rr}	35							ns
Typical Thermal Resistance ⁽²⁾	R _{θJA} R _{θJC}	60 20							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

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

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.

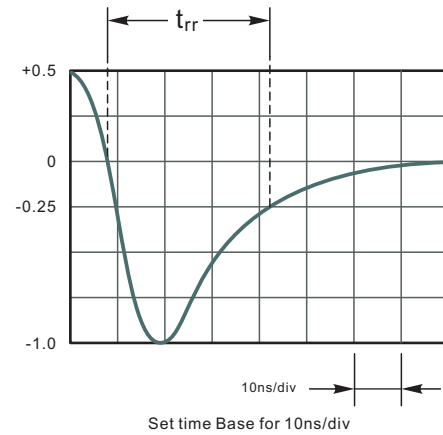


Fig.2 Maximum Average Forward Current Rating

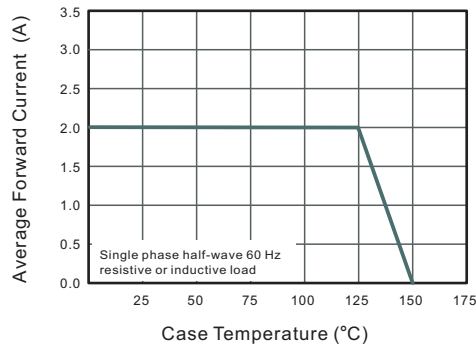


Fig.3 Typical Reverse Characteristics

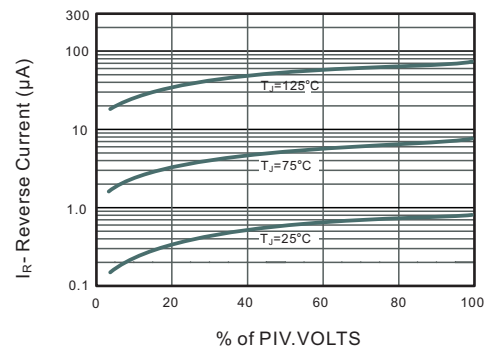


Fig.4 Typical Forward Characteristics

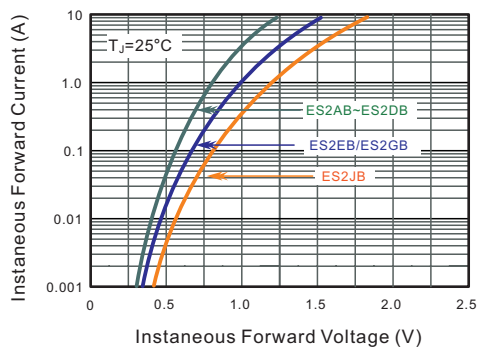


Fig.5 Typical Junction Capacitance

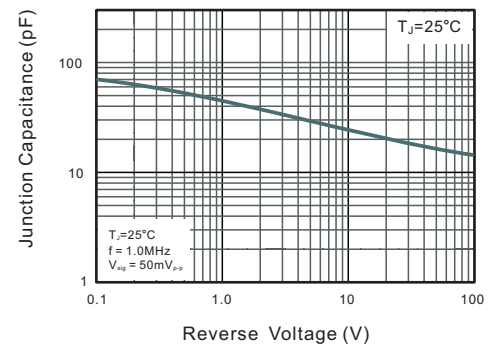
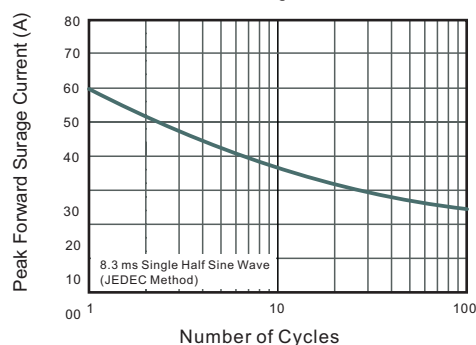


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

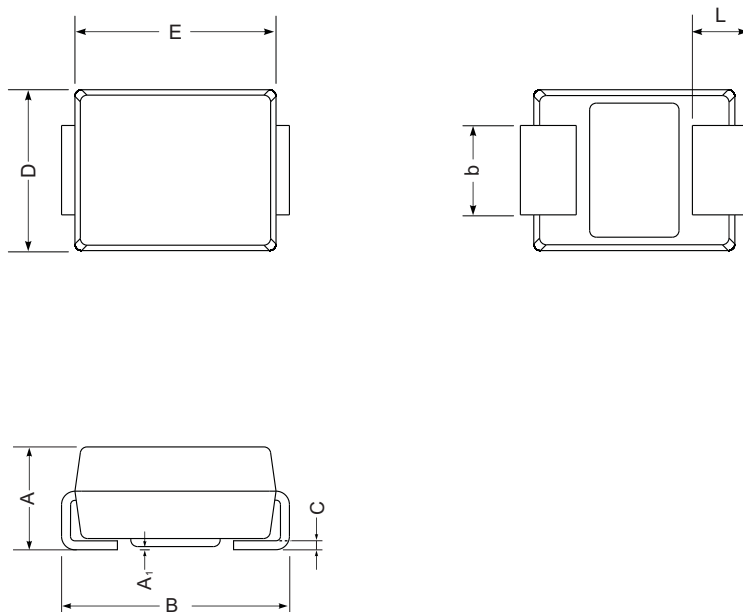




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

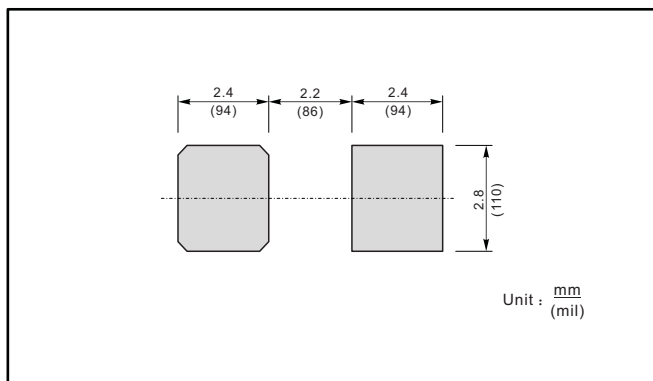
SMB



SMB mechanical data

UNIT		A	E	D	B	A ₁	L	C	b
mm	max	2.5	4.70	3.94	5.5	0.20	1.5	0.305	2.2
	min	2.1	4.06	3.3	5.0	0.05	0.8	0.152	1.9
mil	max	98	185	155	216	7.9	59	12	87
	min	82	160	130	196	2.0	32	6	75

The recommended mounting pad size



Marking

Type number	Marking code
ES2AB	ES2A
ES2BB	ES2B
ES2CB	ES2C
ES2DB	ES2D
ES2EB	ES2E
ES2GB	ES2G
ES2JB	ES2J