



ES2DLG THRU ES2JLG

Surface Mount Superfast Recovery Rectifier

Reverse Voltage – 200 to 600 V Forward Current –2 A

FEATURES

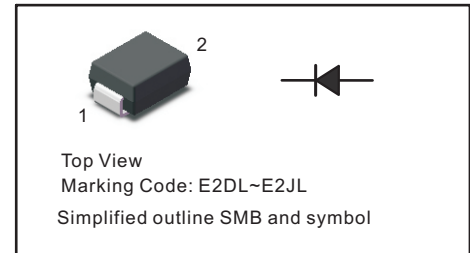
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

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

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	ES2DLG	ES2ELG	ES2GLG	ES2JLG	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	140	210	280	420	V
Maximum DC Blocking Voltage	V _{DC}	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}	40				A
Maximum Forward Voltage at 2 A	V _F	1	1.25		1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	5				μA
T _a = 25 °C T _a =125 °C		100				
Typical Junction Capacitance at V _R =4V, f=1MHz	C _j	25				pF
Maximum Reverse Recovery Time ⁽¹⁾	t _{rr}	35				ns
Typical Thermal Resistance ⁽²⁾	R _{θJA} R _{θJC}	65 20				°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150				°C

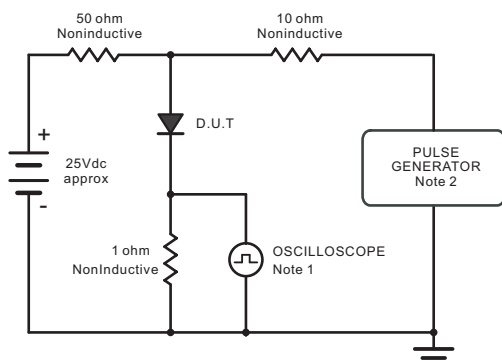
(1) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.

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



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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.

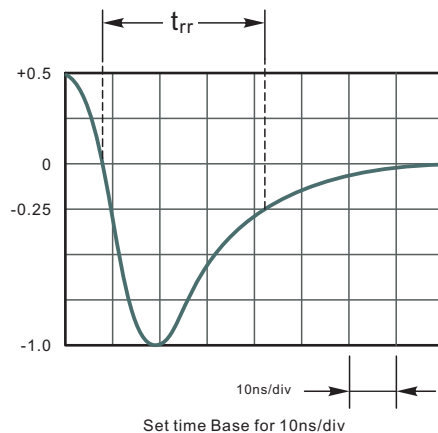


Fig.2 Maximum Average Forward Current Rating

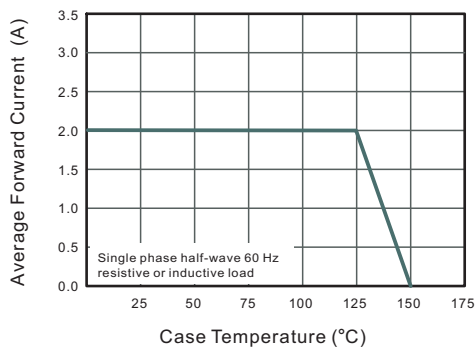


Fig.3 Typical Reverse Characteristics

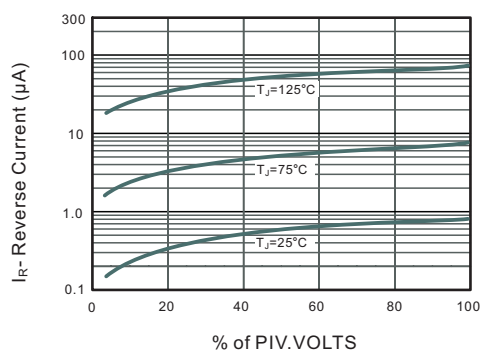


Fig.4 Typical Forward Characteristics

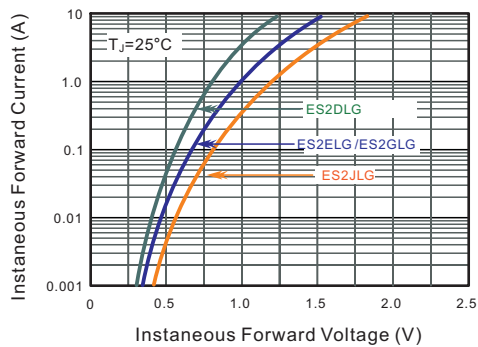


Fig.5 Typical Junction Capacitance

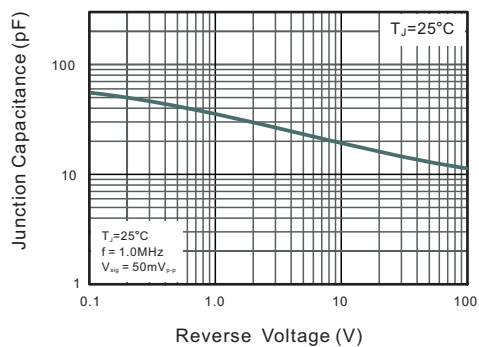
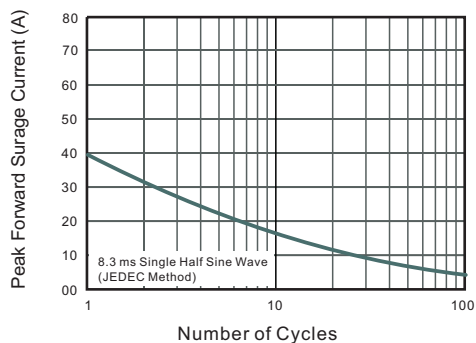
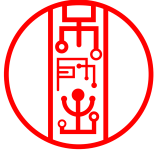


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



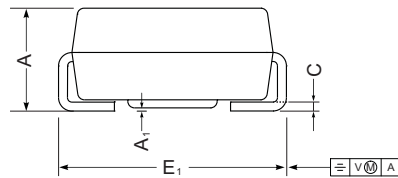
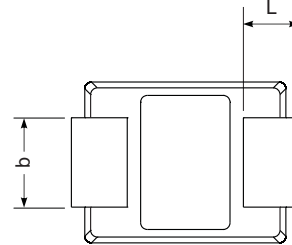
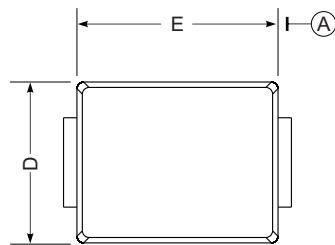


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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

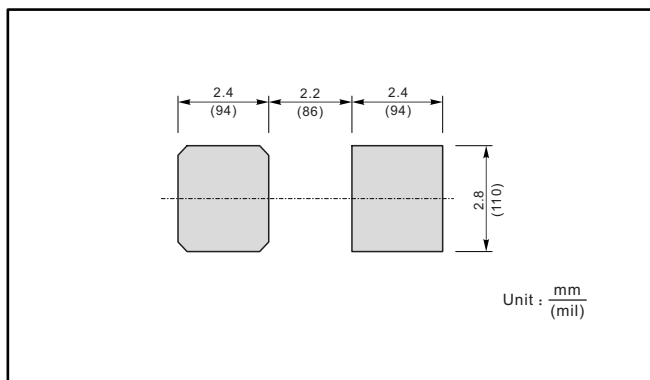
SMB



SMB mechanical data

UNIT		A	E	D	E ₁	A ₁	L	C	b
mm	max	2.44	4.70	3.94	5.59	0.20	1.5	0.305	2.2
	min	2.13	4.06	3.3	5.08	0.05	0.8	0.152	1.9
mil	max	96	185	155	220	7.9	59	12	87
	min	84	160	130	200	2.0	32	6	75

The recommended mounting pad size



Marking

Type number	Marking code
ES2DLG	E2DL
ES2ELG	E2EL
ES2GLG	E2GL
ES2JLG	E2JL