

Descriptions

Surface Mount Superfast Recovery Rectifier, Reverse Voltage: 50 to 600V, Forward Current: 2.0A, SMB package.

Features

- Glass Passivated Chip Junction,
- Fast reverse recovery time,
- Lead free in comply with EU ROHS 2011/65/EU directives,
- For surface mounted applications,
- Halogen free product.

Applications

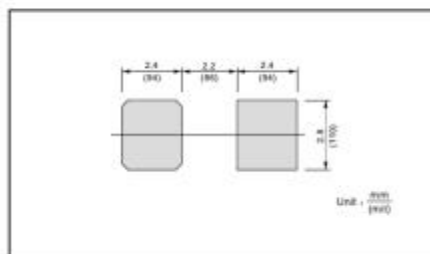
General purpose.

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
		ES2AB	ES2BB	ES2CB	ES2DB	ES2EB	ES2GB	ES2JB	
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℃	I _{F (AV)}	2.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	60							A
Typical Junction Capacitance at V _R =4V, f=1MHZ	C _j	40							pF
Typical Thermal Resistance ⁽¹⁾	R _{θJA}	60							℃/W
	R _{θJC}	20							
Operating and Storage Temperature Range	T _j , T _{stg}	-55~+150							℃

Note:

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

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Rating							Unit
			ES2AB	ES2BB	ES2CB	ES2DB	ES2EB	ES2GB	ES2JB	
Maximum Forward Voltage	V _F	I _F =2.0A	1.0				1.25		1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	T _a =25℃	5.0							μA
		T _a =125℃	100							μA
Maximum Reverse Recovery Time	t _{rr}	I _F =0.5A I _R =1.0A I _{rr} =0.25A	35							ns

Electrical Characteristic Curve

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

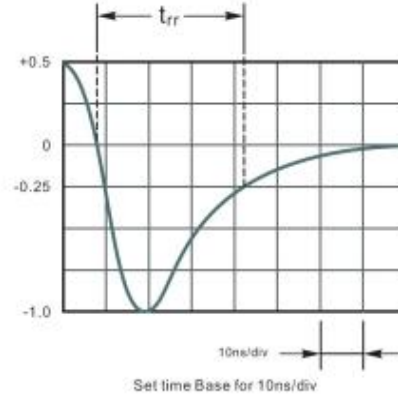
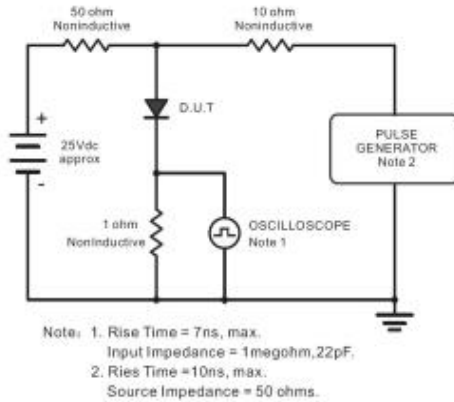


Fig.2 Maximum Average Forward Current Rating

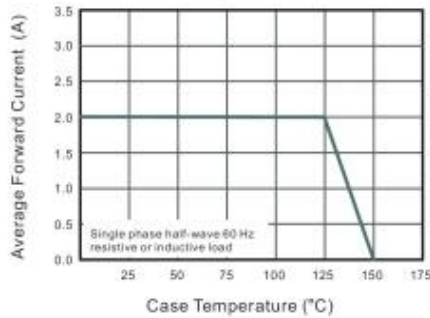


Fig.3 Typical Reverse Characteristics

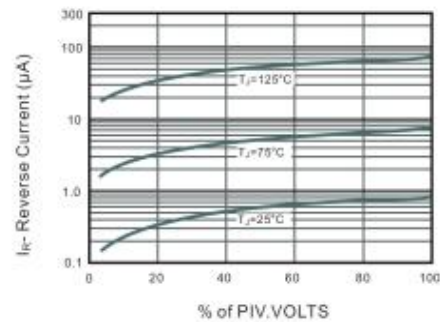


Fig.4 Typical Forward Characteristics

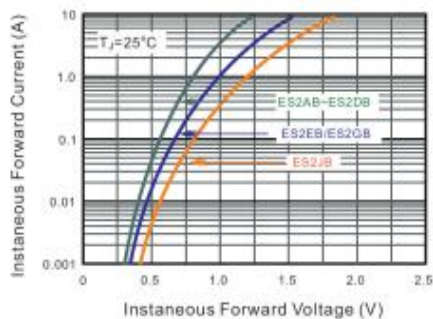


Fig.5 Typical Junction Capacitance

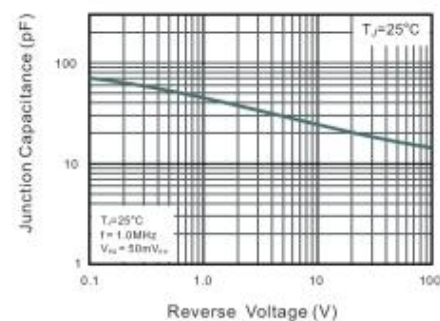
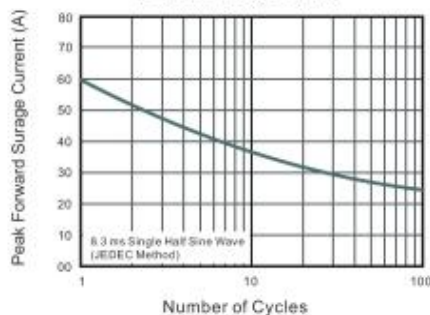


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Marking Instructions



Marking

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

Note:
ES2A: Product Type Code
**** : Lot No. Code , The 1st * means:YM Code , The last 3 * means:little Lot No Code

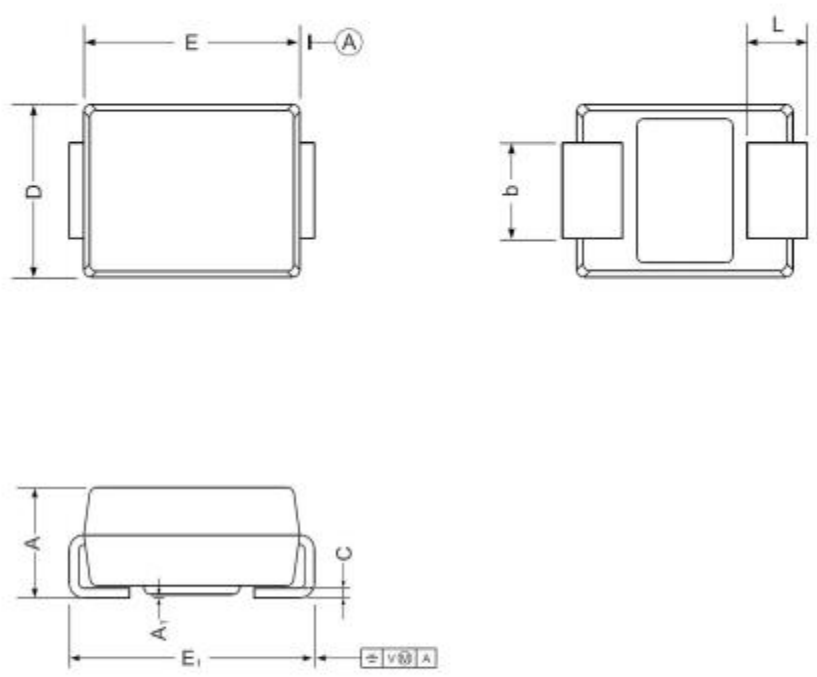
Packaging SPEC

REEL

Package Type	Units					Dimension (unit: mm³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SMB	3000	5	15000	5	75000	7" ×11	185X180X105	390X385X205

Package Outline Dimensions

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