

ES3AB~ES3JB

Rev.A Dec.-2017

/ Descriptions

50V ~ 600V 3.0A SMB

Surface Mount Superfast Recovery Rectifier, Reverse Voltage: 50 to 600V, Forward Current: 3.0A, SMB package.

/ Features

2011/65/EU RoHS

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

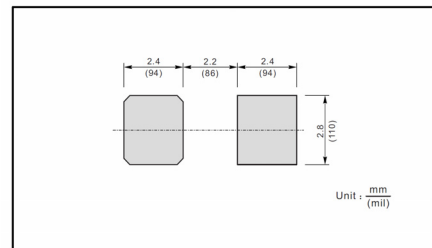


/ Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



/ Marking

See Marking Instructions

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating							Unit
		ES3AB	ES3BB	ES3CB	ES3DB	ES3EB	ES3GB	ES3JB	
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 $T_c=100$	$I_{F AV}$	3.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	90							A
Typical Junction Capacitance at $V_R=4V, f=1MHz$	C_j	45							pF
Typical Thermal Resistance ⁽¹⁾	R_{JA}	50							/W
	R_{JC}	16							
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)

Parameter	Symbol	Test Conditions	Rating						Unit
			ES3AB	ES3BB	ES3CB	ES3DB	ES3EB	ES3GB	
Maximum Forward Voltage	V_F	$I_F=3.0A$	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

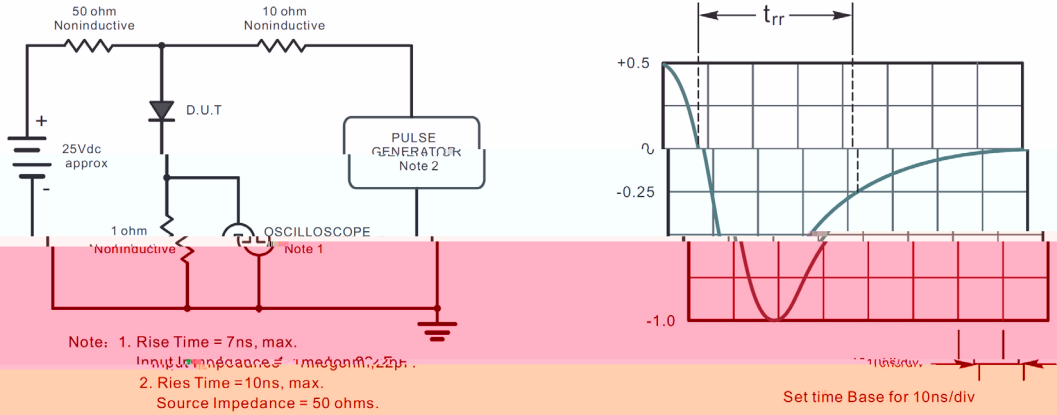


Fig.2 Maximum Average Forward Current Rating

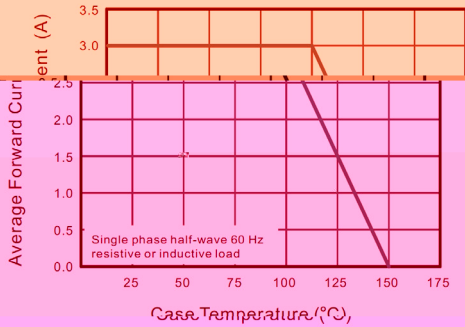


Fig.3 Typical Reverse Characteristics

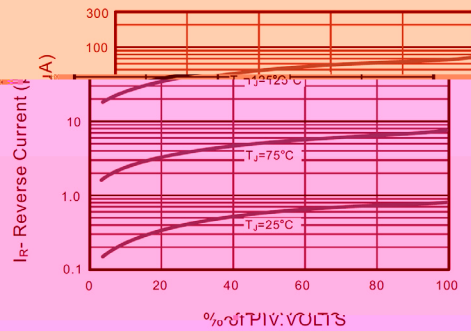


Fig.4 Forward Current vs. Instantaneous Current

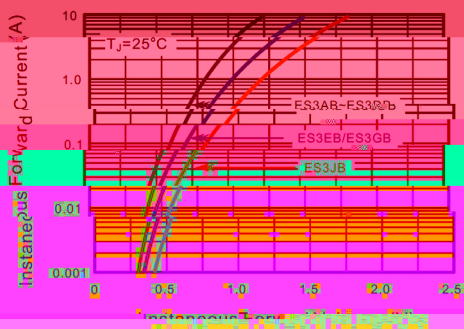
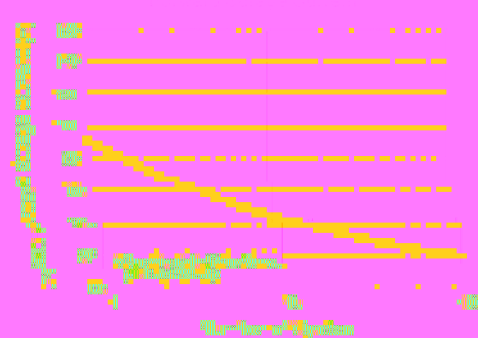
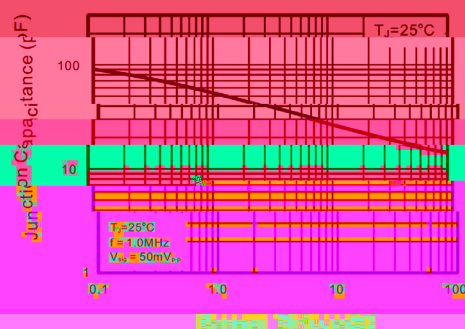
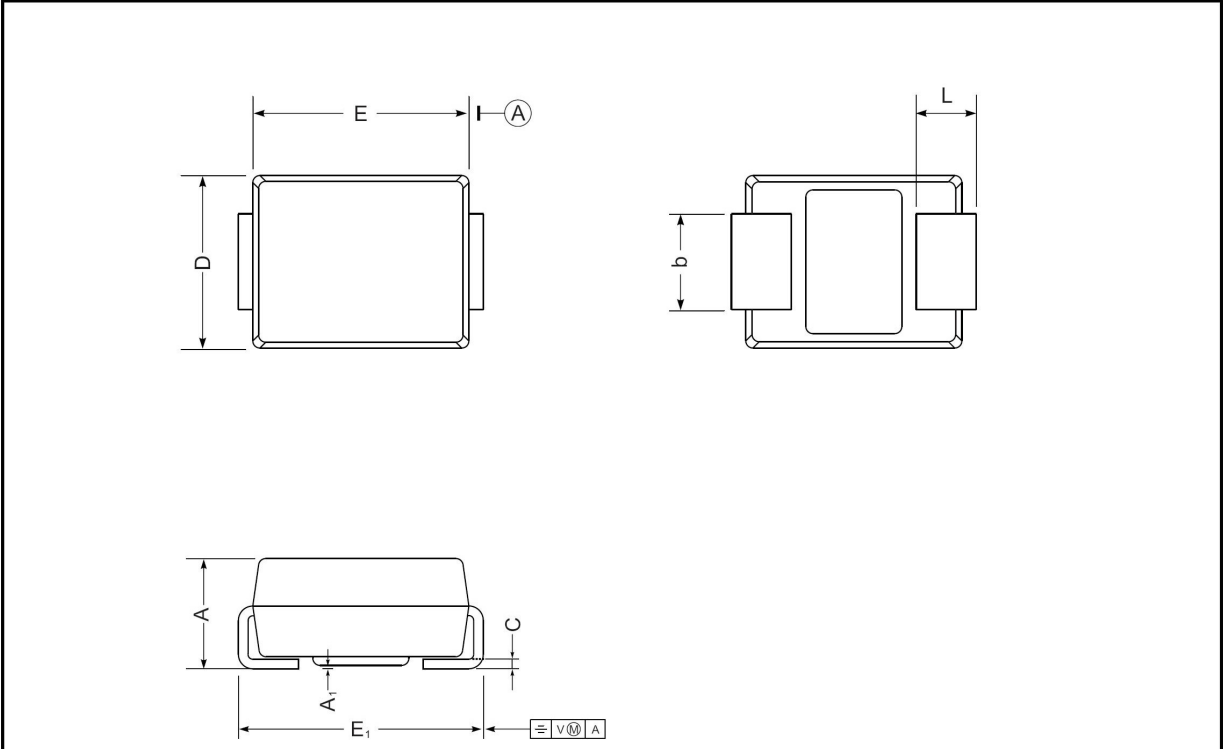


Fig.5 Junction Capacitance vs. Frequency



/ Package 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	1.53	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

/ Marking Instructions

Marking

Type number	Marking
ES3AB	ES3A
ES3BB	ES3B
ES3CB	ES3C
ES3DB	ES3D
ES3EB	ES3E
ES3FB	ES3F
ES3GB	ES3G
ES3JB	ES3J

/ Marking Instructions



ES3A

1 *

3 *

Note:

ES3A Product Type Code

**** Lot No. Code The 1st * means:YM Code The last 3 * means:little Lot No Code

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