

# ES5ABF~ES5JBF

ROHS

## Surface Mount Superfast Recovery Rectifier

### 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: SMBF
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Approx. Weight : 57mg/0.002oz
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

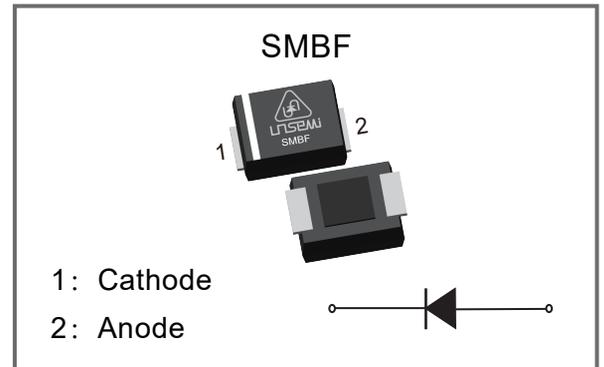
Parameter	Symbol	ES5ABF	ES5BBF	ES5CBF	ES5DBF	ES5EBF	ES5GBF	ES5JBF	Units
Maximum Repetitive Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	V
Maximum RMS voltage	VRMS	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at Tc =115°C	IF(AV)	5.0							A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load	IFSM	150							A
Maximum Forward Voltage at at 5A	VF	1.0				1.25	1.70	V	
Maximum DC Reverse Current at Rated DC Reverse Voltage	Ta=25°C	10							µA
	Ta=125°C	100							
Typical Junction Capacitance at VR=4V, f=1MHz	Cj	50							pF
Maximum Reverse Recovery Time <sup>(1)</sup>	trr	35							nS
Typical Thermal Resistance <sup>(2)</sup>	R <sub>θJA</sub>	40							°C/W
	R <sub>θJC</sub>	12							
Operating and Storage Temperature Range	TJ,Tstg	-55 ~ +150							°C

Note: (1) Measured with IF=0.5A, IR=1A, Irr=0.25A.

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



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Electrical Characteristics Curves

Fig.1 Forward Current Derating Curve

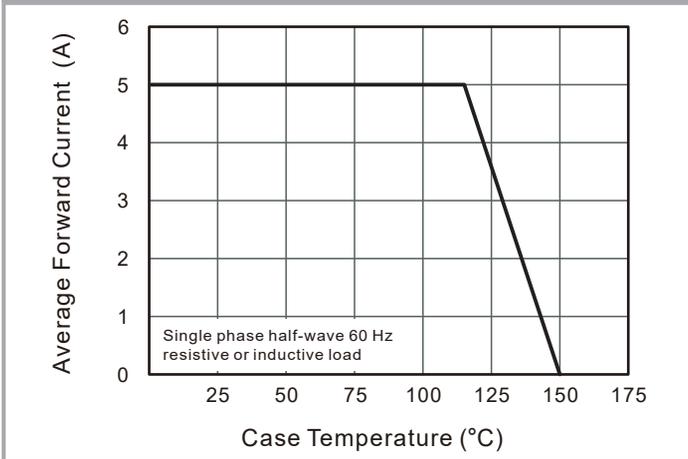


Fig. 2 Typical Reverse Characteristics

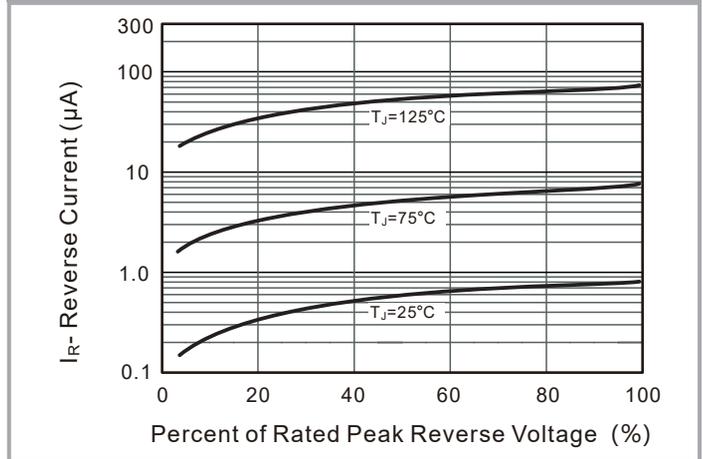


Fig.3 Typical Forward Characteristic

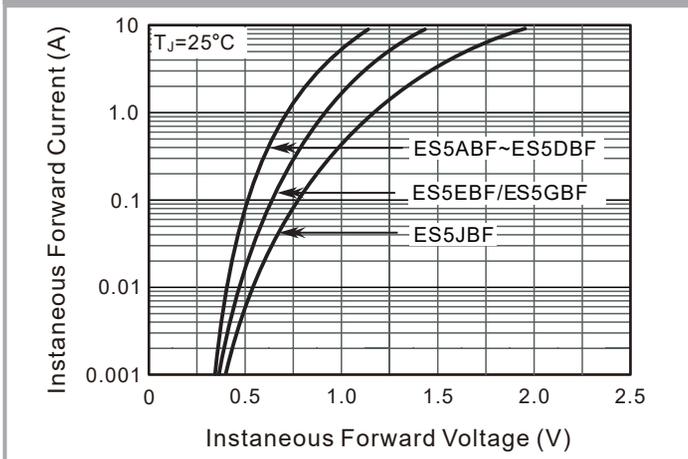


Fig. 4 Typical Junction Capacitance

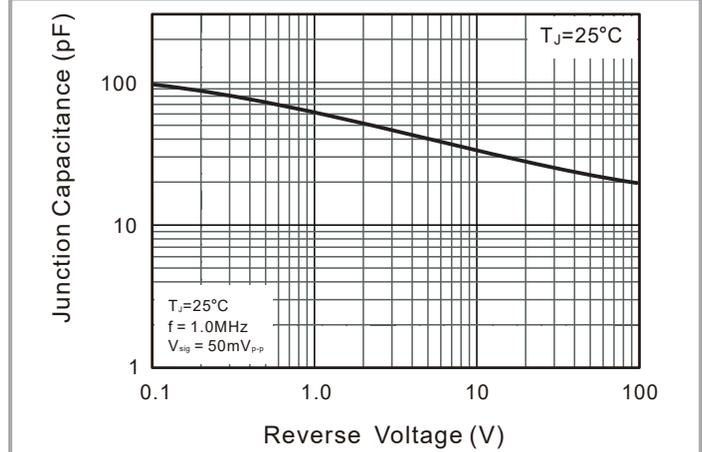
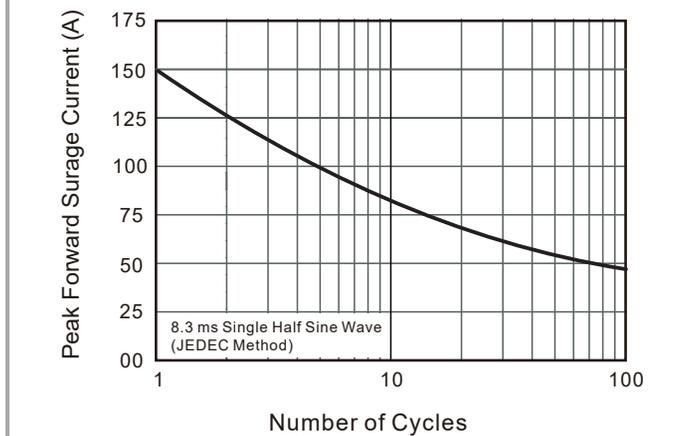
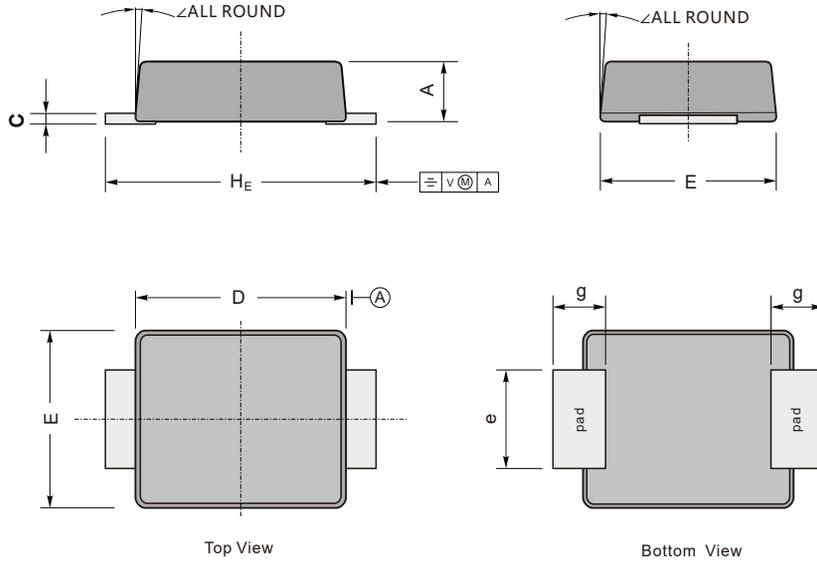


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline & Dimensions



UNIT		A	C	D	E	H <sub>E</sub>	e	g	∠
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		

Marking

Type Number	ES5ABF	ES5BBF	ES5CBF	ES5DBF	ES5EBF	ES5GBF	ES5JBF
Making	E5AB	E5BB	E5CB	E5DB	E5EB	E5GB	E5JB

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