



ES5ABF THRU ES5JBF

Surface Mount Superfast Recovery Rectifier

Reverse Voltage -50~600V Forward Current -5A

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

Maximum Ratings And Electrical Characteristics

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

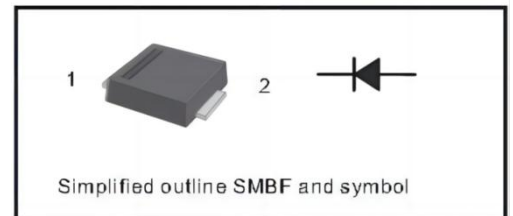
Parameter		Symbol	ES5 ABF	ES5 BBF	ES5 CBF	ES5 DBF	ES5 EBF	ES5 GBF	ES5 JBF	Units
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage		V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage		V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at T _L =100°C		I _{F(AV)}	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimpose on Rated Load(JEDEC Method)		I _{FSM}	150				135			A
Maximum Forward Voltage at 5A		V _F	1.0				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta = 25°C	I _R	10							μA
	Ta = 125°C		100							
Typical Junction Capacitance		C _J	95							pF
Maximum Reverse Recovery Time ⁽¹⁾		t _{rr}	35							ns
Typical Thermal Resistance ⁽²⁾		R _{θJA}	45							°C/W
Operating and Storage Temperature Range		T _J ,T _{STG}	-55~+150							°C

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

(2). P.C.B. mounted with 0.5 x 0.5cm(12.7 x 12.7mm) copper pad areas

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode





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Typical Characteristics

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

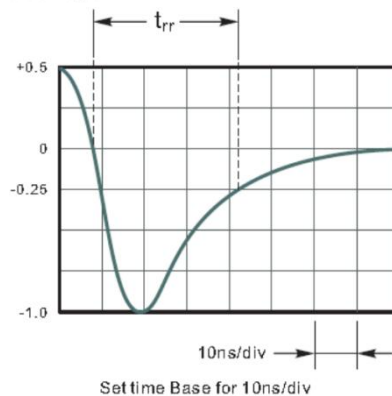
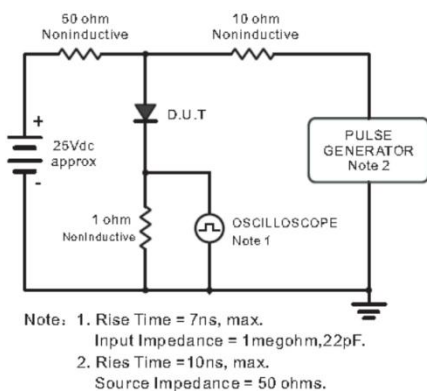


Fig.2 Maximum Average Forward Current Rating

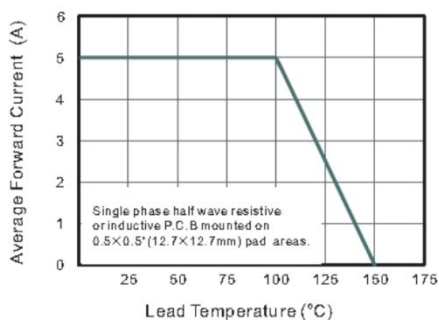


Fig.3 Typical Reverse Characteristics

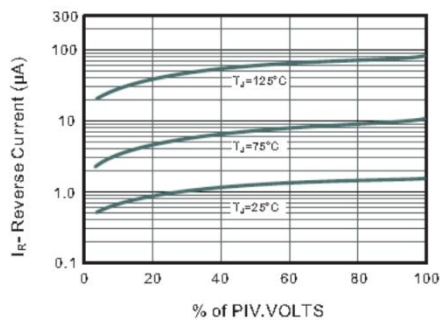


Fig.4 Typical Forward Characteristics

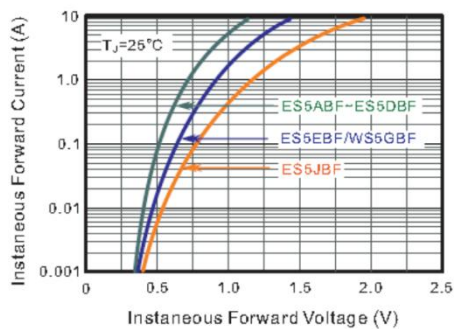


Fig.5 Typical Junction Capacitance

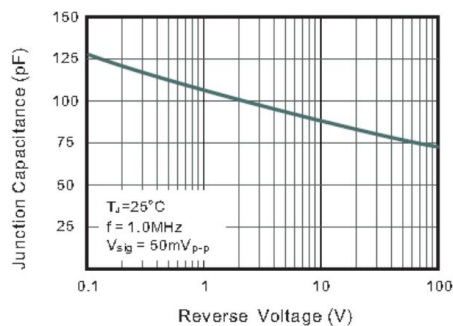
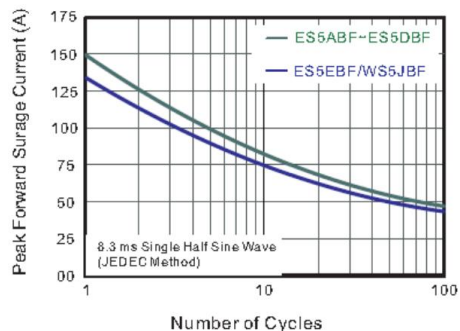


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



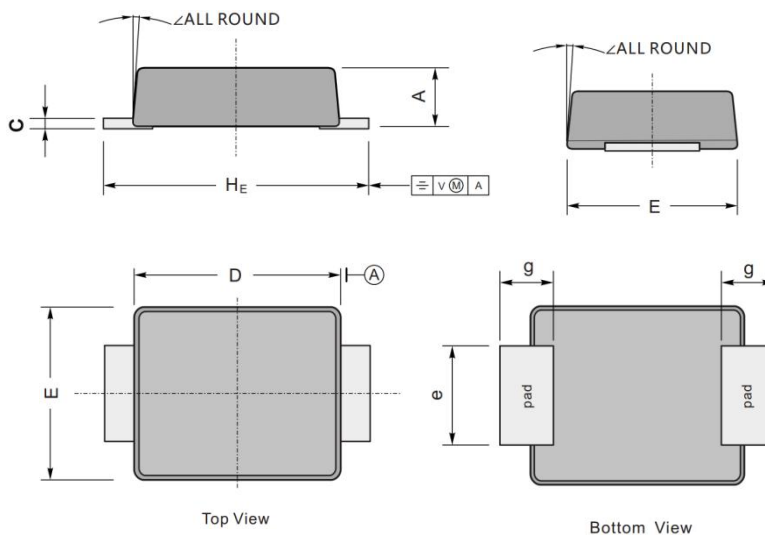


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Package Information

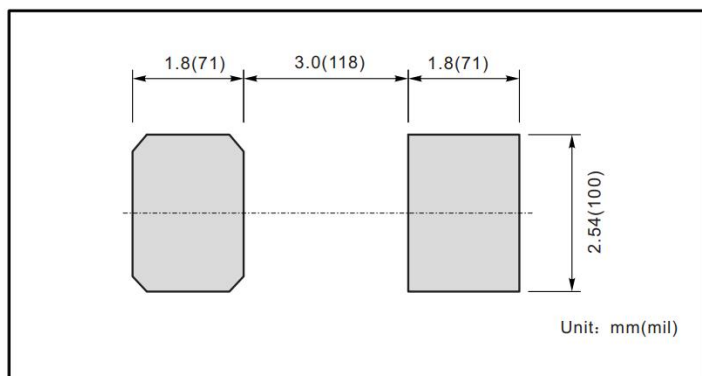
SMBF

Dimensions in mm



UNIT		A	C	D	E	H _E	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		

The recommended mounting pad size



Marking

Type number	Marking code
ES5ABF	ES5A
ES5BBF	ES5B
ES5CBF	ES5C
ES5DBF	ES5D
ES5EBF	ES5E
ES5GBF	ES5G
ES5JBF	ES5J