



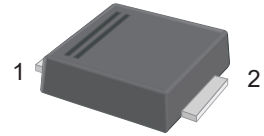
ES3ABF-PJ~ES3JBF-PJ

Surface Mount Superfast Recovery Rectifiers

Features

- For surface mount applications
- Glass passivated chip junction
- Low profile package
- Easy to pick and place
- Superfast reverse recovery time

SMBF



1.Cathode  2.Anode

Marking Code:

ES3ABF-PJ: E3AB
 ES3BBF-PJ: E3BB
 ES3CBF-PJ: E3CB
 ES3DBF-PJ: E3DB
 ES3EBF-PJ: E3EB
 ES3GBF-PJ: E3GB
 ES3JBF-PJ: E3JB

Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	ES3ABF -PJ	ES3BBF -PJ	ES3CBF -PJ	ES3DBF -PJ	ES3EBF -PJ	ES3GBF -PJ	ES3JBF -PJ	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 $T_C = 125^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage at 3 A	V_F	1.0				1.25		1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R					5			μA
						100			
Typical Junction Capacitance ^{Note1}	C_j					35			pF
Typical Thermal Resistance ^{Note2}	$R_{\theta JA}$					45			$^\circ\text{C/W}$
	$R_{\theta JC}$					15			
Maximum Reverse Recovery Time ^{Note3}	T_{rr}					35			nS
Junction Temperature	T_J					150			$^\circ\text{C}$
Storage Temperature Range	T_{STG}					-55 to +150			$^\circ\text{C}$

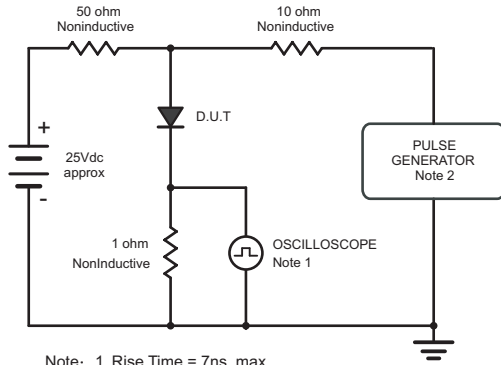
Note:

1. Measured at 1 MHz and applied reverse voltage of 4 V DC.
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.
3. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

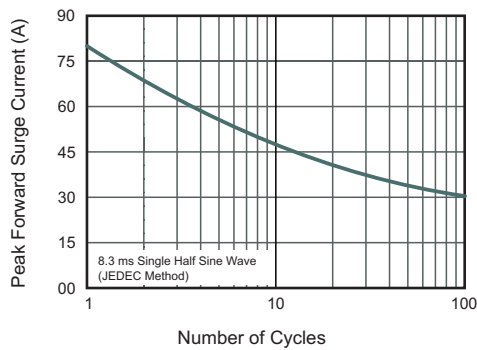
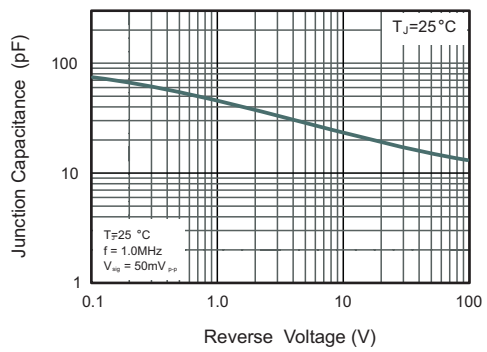
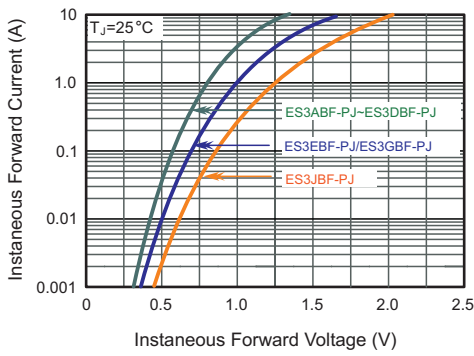
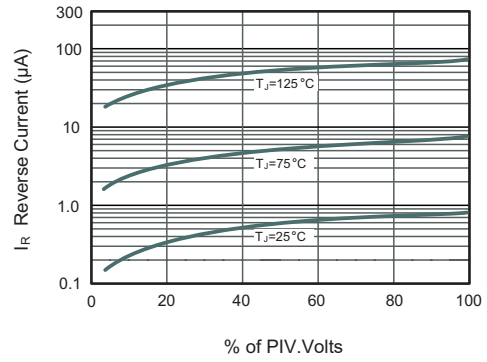
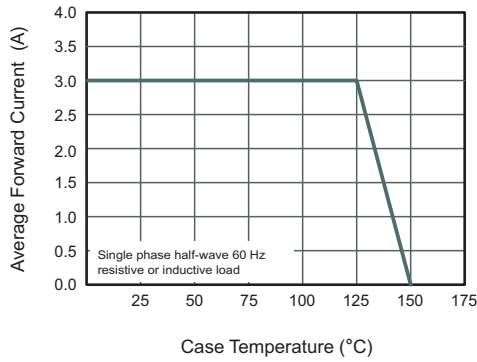
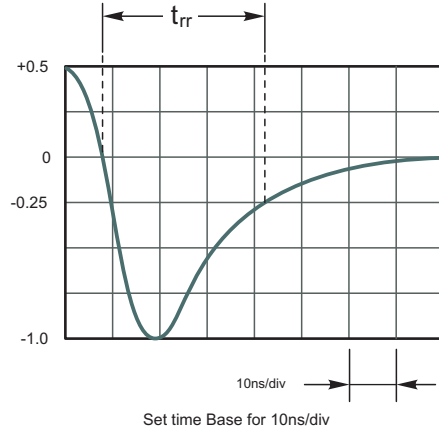


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Typical Characteristic Curves



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.





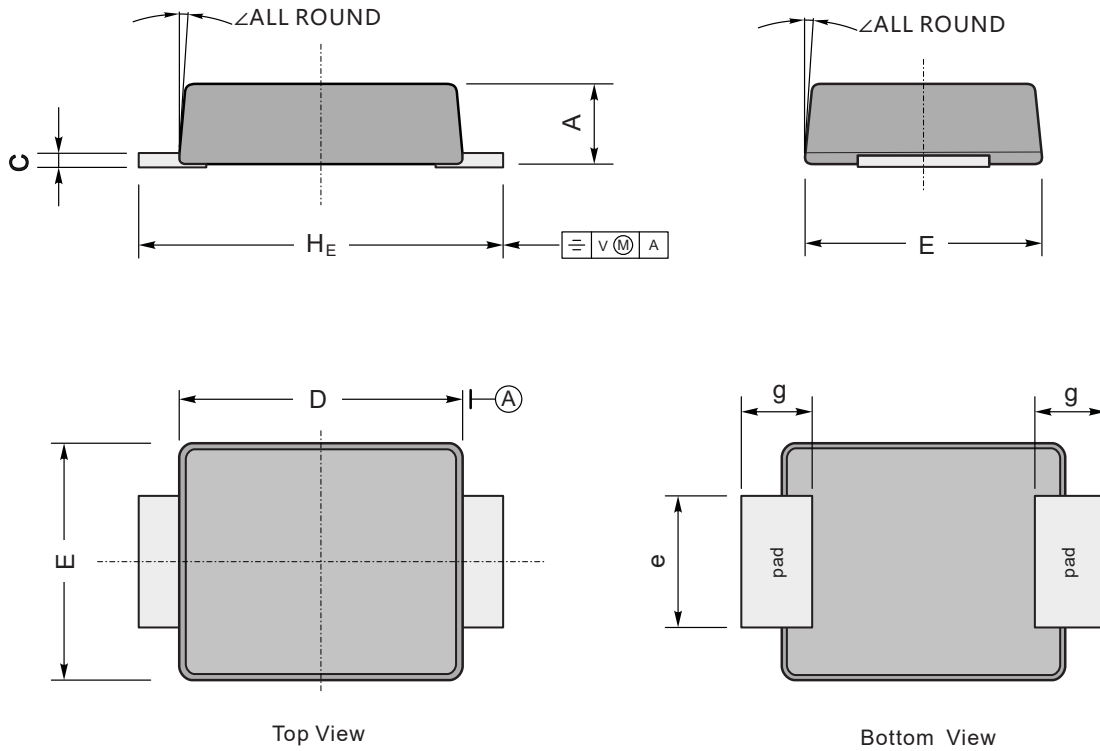
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Package Outline

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		