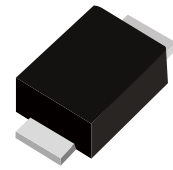


FEATURES

- Idea for printed circuit board
- Glass passivated junction chip
- Low reverse leakage
- High forward surge current capability



SMBF



Schematic Symbol

MECHANICAL DATA

- Case : Molded plastic body
- Polarity : Polarity symbol marking on body
- Mounting Position : Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS AND CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Parameter		Symbol	ES3ABF	ES3BBF	ES3CBF	ES3DBF	ES3FBF	ES3GBF	ES3JBF	Unit
Marking			ES3ABF	ES3BBF	ES3CBF	ES3DBF	ES3FBF	ES3GBF	ES3JBF	
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	
Maximum DC blocking voltage		V _{DC}	50	100	150	200	300	400	600	
Maximum average forward rectified current at T _L =100°C		I _{F(AV)}	3.0							A
Surge peak forward current,8.3ms single half sine-wave superimposed on rated load per diode		I _{FSM}	100.0							
Maximum instantaneous forward voltage at 3.0A		V _F	1.0				1.3		1.7	V
Maximum DC reverse current at rated DC blocking voltage	T _A =25°C	I _R	2.0							μA
	T _A =125°C		200							
Maxiumum reverse recovery time(Note 1)		T _{rr}	35							ns
Typical junction capacitance (Note2)		C _J	65.0							pF
Typical thermal resistance		R _{θJA}	78.0							°C/W
Operating junction and storage temperature range		T _J ,T _{STG}	-55 to +150							°C

Note :

- Reverse recovery time test condition: $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{RR}=0.25\text{A}$
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

CHARACTERISTIC CURVES

Fig. 1- Derating Curve Output Rectified Current

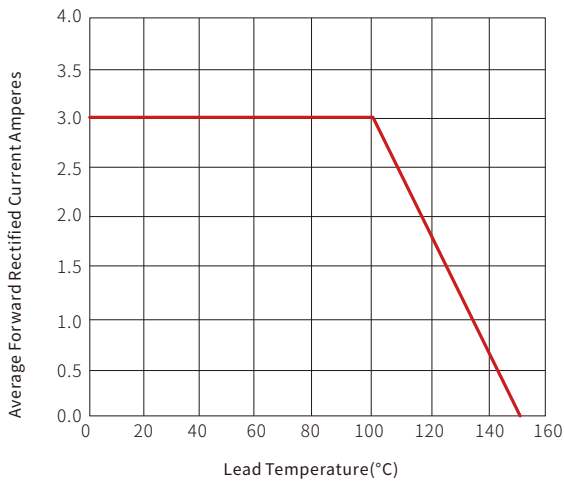


Fig. 2- Maximum Non-Repetitive Peak Forward Surge Current Perleg

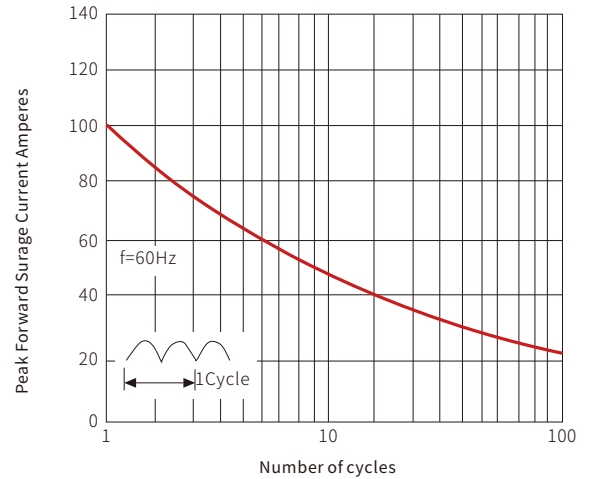


Fig. 3- Typical Forward Voltage Characteristics

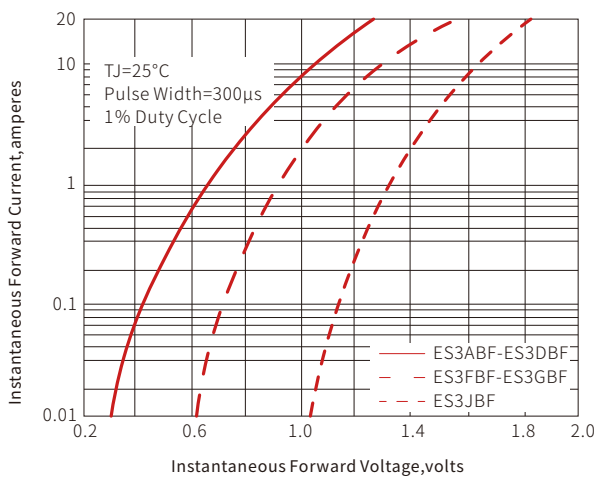
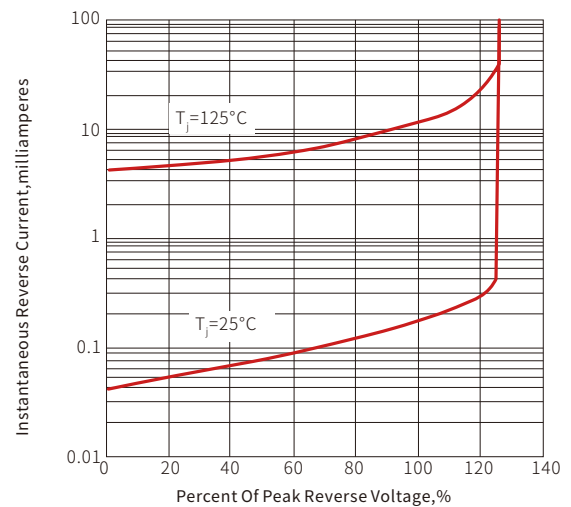
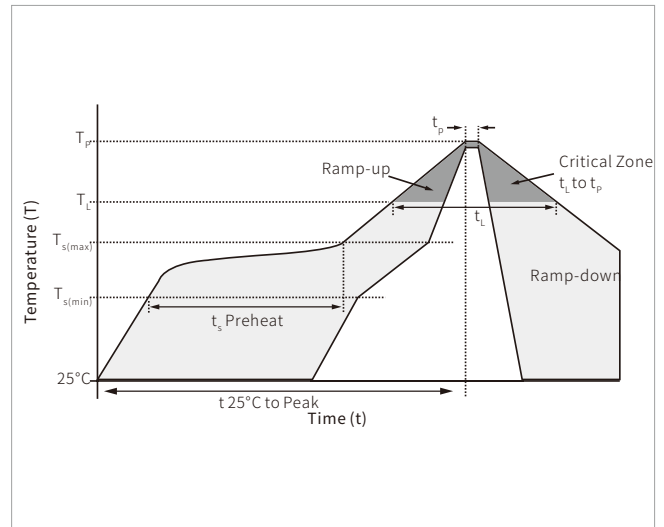


Fig. 4- Typical Reverse Leakage Characteristics

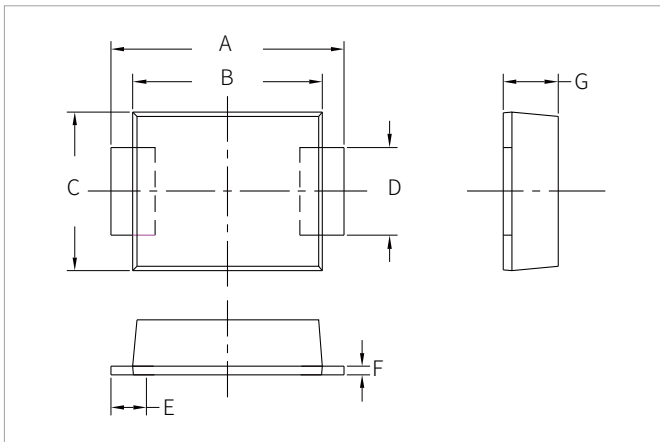


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

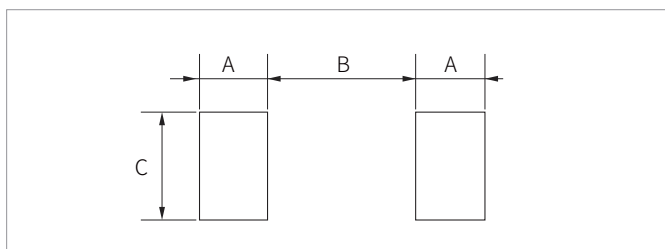


SMBF PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.10	5.50	0.201	0.217
B	4.10	4.50	0.161	0.177
C	3.40	3.80	0.134	0.150
D	1.90	2.10	0.075	0.083
E	0.70	-	0.028	-
F	0.15	0.25	0.006	0.010
G	1.00	2.20	0.039	0.087

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.0	-	0.079	-
B	-	2.5	-	0.098
C	2.2	-	0.087	-

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
ES3ABF-ES3JBF	SMBF	3000PCS	13"

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By QR Code

Website



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