ES3AB~ES3JB

ROHS

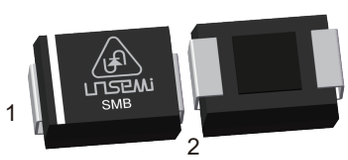
Surface Mount Superfast Recovery Rectifier

www.unsemi.com.tw

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

SMB



1：Cathode

2：Anode

Mechanical Data

- ◆ Case: SMB
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Approx. Weight : 0.095g / 0.003oz
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

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

Parameter		Symbol	ES3AB	ES3BB	ES3CB	ES3DB	ES3EB	ES3GB	ES3JB	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 Tc =100℃		$I_{F(AV)}$	3.0							A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load		I_{FSM}	90							A
Maximum Forward Voltage at at 3A		V_F	1.0				1.25		1.68	V
Maximum DC Reverse Current at Rated DC Reverse Voltage	Ta=25℃	I_R	5.0							μA
	Ta=125℃	I_R	100							
Typical Junction Capacitance at V_R=4V, f=1MHz		Cj	45							pF
Maximum Reverse Recovery Time (1)		trr	35							nS
Typical Thermal Resistance (2)		$R_{\theta JA}$	50							℃/W
		$R_{\theta JC}$	16							
Operating and Storage Temperature Range		T_J,Tstg	-55 ~ +150							℃

Note: (1) Measured with I_F=0.5A, I_R=1A, Irr=0.25A.

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

Electrical Characteristics Curves

Fig.1 Forward Current Derating Curve

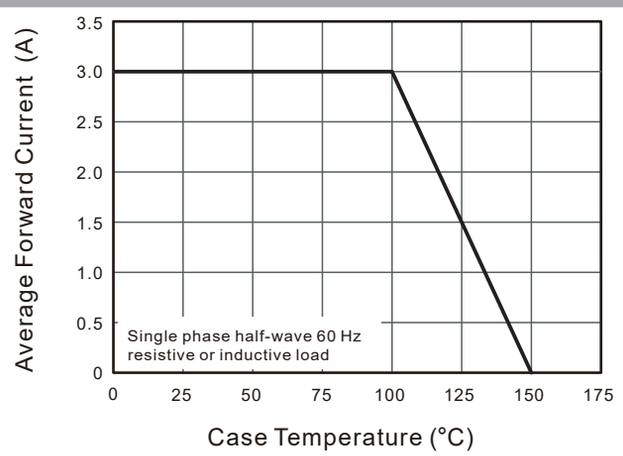


Fig. 2 Typical Reverse Characteristics

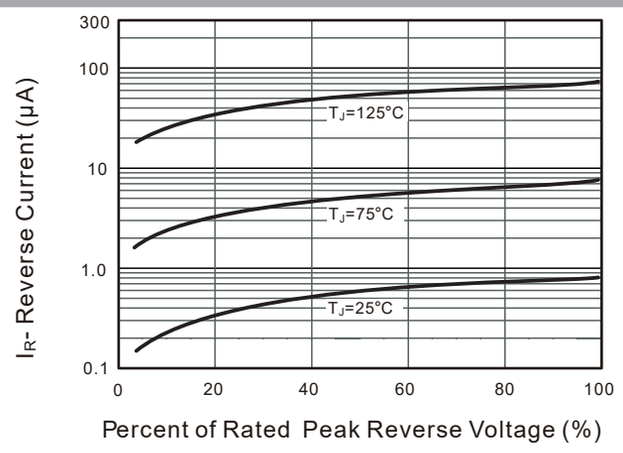


Fig.3 Typical Forward Characteristic

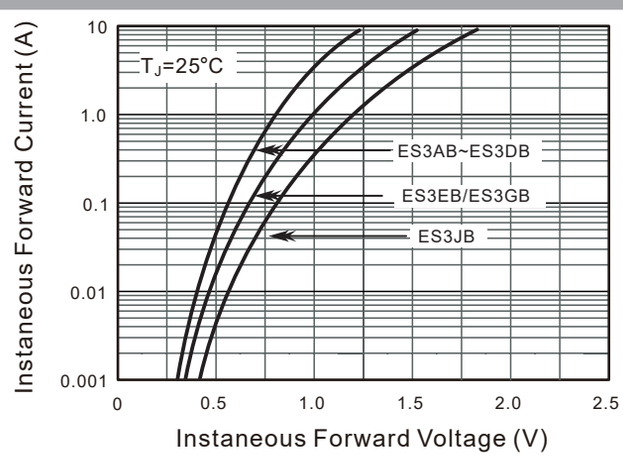


Fig. 4 Typical Junction Capacitance

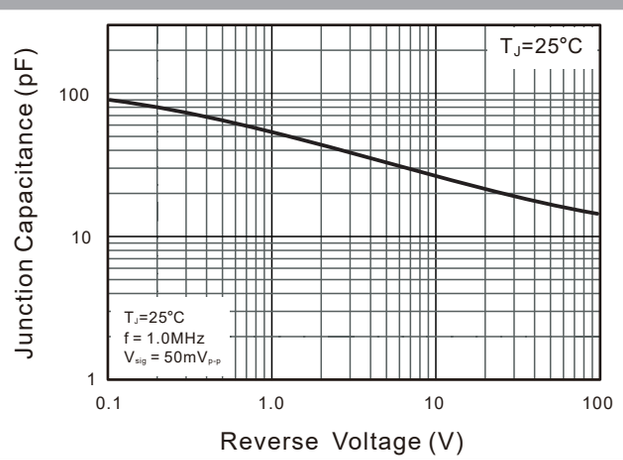
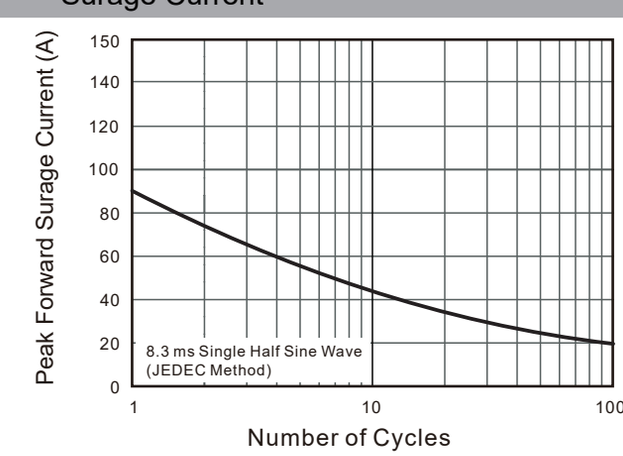
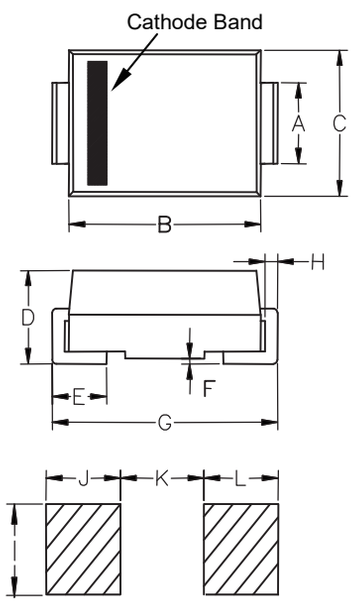


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



Package Outline & Dimensions

DO-214AA (SMB)



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.077	0.087	1.960	2.200
B	0.171	0.191	4.350	4.850
C	0.130	0.155	3.300	3.940
D	0.084	0.096	2.130	2.440
E	0.030	0.060	0.750	1.520
F	-	0.008	-	0.203
G	0.201	0.216	5.100	5.500
H	0.006	0.012	0.152	0.305
I	0.089	-	2.260	-
J	0.085	-	2.160	-
K	-	0.107	-	2.740
L	0.085	-	2.160	-

Marking

Type Number	ES3AB	ES3BB	ES3CB	ES3DB	ES3EB	ES3GB	ES3JB
Making	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J

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