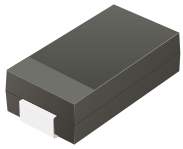
ES3AB-HF Thru. ES3JB-HF

Reverse Voltage: 50 to 600 Volts
Forward Current: 3 Amp
RoHS Device
Halogen Free



Features

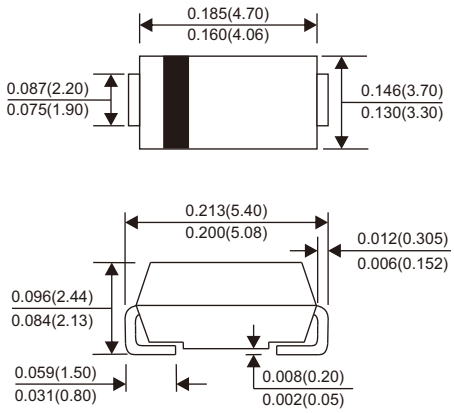
- For surface mounted applications.
- Low profile package.
- Glass passivated chip junction.
- Super fast reverse recovery time.

Mechanical data

- Case: SMB
- Terminals: Solderable per MIL-STD-750, method 2026.

Circuit Diagram

SMB/DO-214AA



Dimensions in inches and (millimeter)

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, derate by 20%

Parameter	Symbols	ES3AB -HF	ES3BB -HF	ES3CB -HF	ES3DB -HF	ES3EB -HF	ES3GB -HF	ES3JB -HF	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°C	$I_{F(AV)}$	3							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	90							A
Max. forward voltage at 3A	V_F	1.0				1.25		1.68	V
Maximum DC reverse current T_a = 25°C at rated DC blocking voltage T_a =125°C	I_R	5 100							μA
Typical junction capacitance at V_R = 4V, f = 1MHz	C_j	45							pF
Maximum reverse recovery time (Note 1)	t_{rr}	35							ns
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	50 16							°C/W
Operating and storage temperature range	T_j, T_{stg}	-55 ~ +150							°C

Notes: 1. Measured with I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A.
2. P.C.B. mounted with 2.0" x 2.0" (5 x 5 cm) copper pad areas.

Rating and Characteristic Curves (ES3AB-HF Thru. ES3JB-HF)

Fig.1 - Max. Average Forward Current Rating

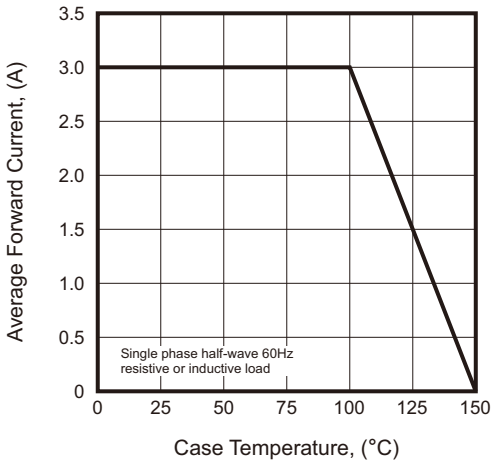


Fig.2 - Typical Reverse Characteristics

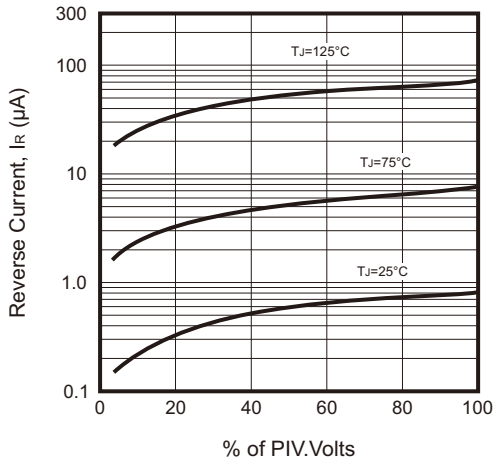


Fig.3 - Typical Forward Characteristic

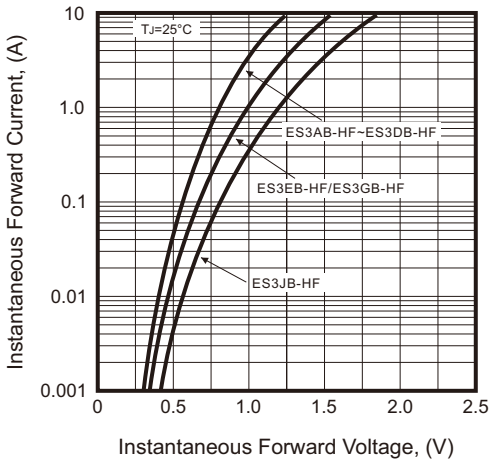


Fig.4 - Typical Junction Capacitance

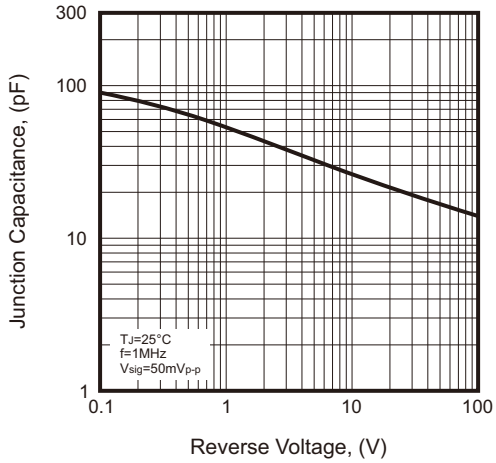
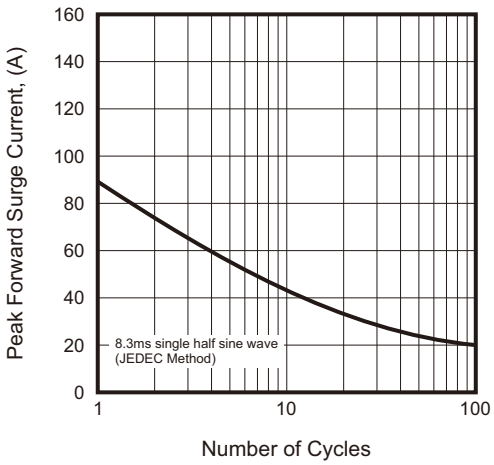
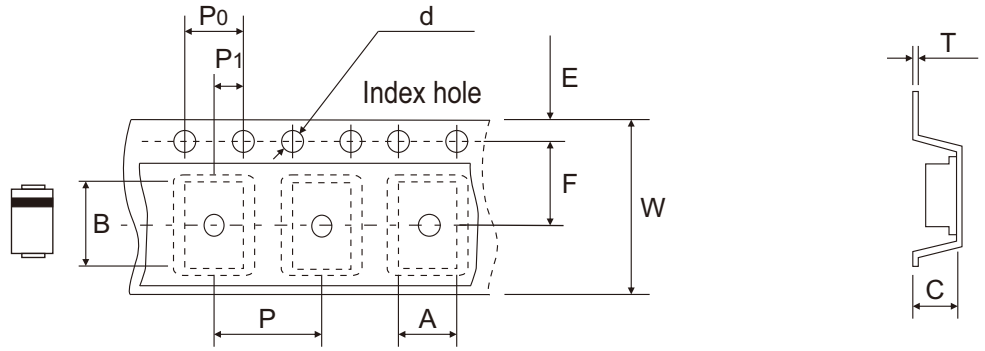
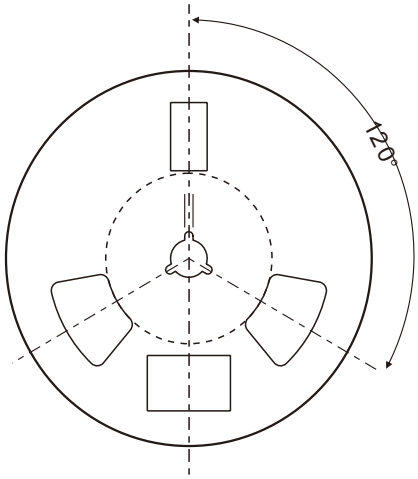


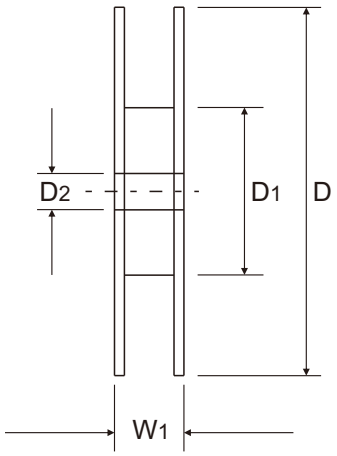
Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current

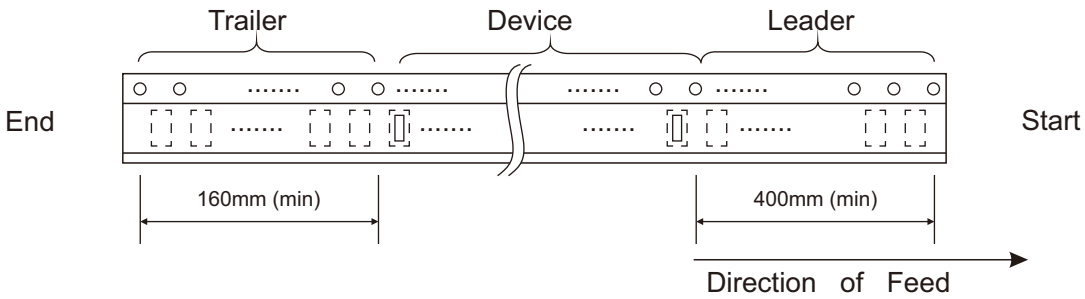


Reel Taping Specification







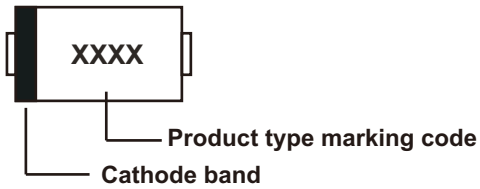


	SYMBOL	A	B	C	d	D	D_1	D_2
DO-214AA (SMB)	(mm)	3.80 ± 0.10	5.50 + 0.05 − 0.10	2.45 ± 0.05	1.55 ± 0.05	330 ± 2.00	100 ± 1.00	13.00 ± 0.20
	(inch)	0.150 ± 0.004	0.217 + 0.002 − 0.004	0.096 ± 0.002	0.061 ± 0.002	12.992 ± 0.079	3.937 ± 0.039	0.512 ± 0.008

	SYMBOL	E	F	P	P_0	P_1	T	W	W_1
DO-214AA (SMB)	(mm)	1.75 ± 0.10	5.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.25 ± 0.05	12.00 ± 0.15	18.00 + 2.00 − 1.00
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.010 ± 0.002	0.472 ± 0.006	0.709 + 0.079 − 0.039

Marking Code

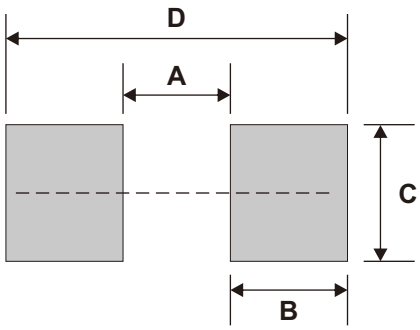
Part Number	Marking Code
ES3AB-HF	ES3A
ES3BB-HF	ES3B
ES3CB-HF	ES3C
ES3DB-HF	ES3D
ES3EB-HF	ES3E
ES3GB-HF	ES3G
ES3JB-HF	ES3J



xxxx = Product type marking code

Suggested PAD Layout

SIZE	DO-214AA (SMB)	
	(mm)	(inch)
A	2.20	0.087
B	2.40	0.094
C	2.80	0.110
D	7.00	0.276



Note: 1. The pad layout is for reference purpose only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AA (SMB)	3,000	13