Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 50 to 800 V

Forward Current - 3 A

Pinning

1.Cathode	2.Anode

DO-214AA/SMB

FEATURES

- The plastic package carries UL Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed:260℃/10 seconds at terminals

Marking Code	
ES3AB	YFW ES3A
ES3BB	YFW ES3B
ES3DB	YFW ES3D
ES3GB	YFW ES3G
ES3JB	YFW ES3J
ES3KB	YFW ES3K

MECHANICAL DATA

- Case: SMB(DO-214AA) package molded plastic body over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Absolute Maximum Ratings and characteristics

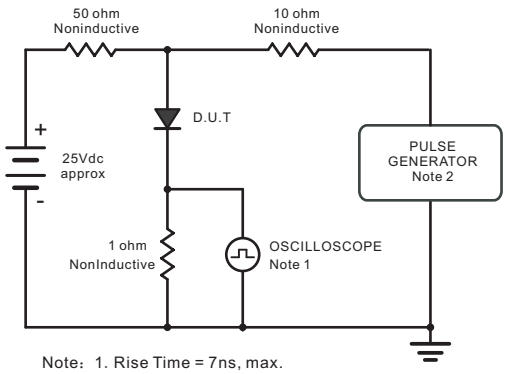
Ratings at 25 °C ambient temperature unless otherwise specified.Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	ES3AB	ES3BB	ES3DB	ES3GB	ES3JB	ES3KB	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	V
Maximum Average Forward Rectified Current at T_c = 125 °C	$I_{F(AV)}$	3						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	100						A
Maximum Instantaneous Forward Voltage at 3 A	V_F	0.95			1.25	1.7		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 (1)	Trr	35						nS
Typical Thermal Resistance (2)	$R_{\theta JA}$/ $R_{\theta JC}$	50/16						°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						°C

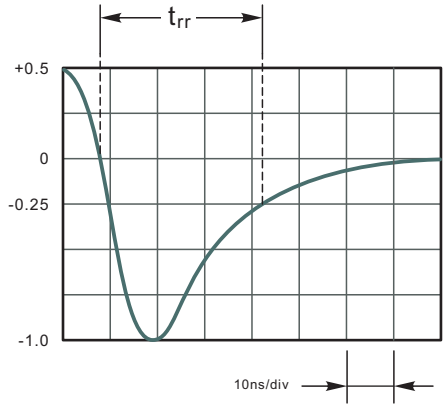
(1) Measured with I_F=0.5A,I_R=1A,I_n=0.25A

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

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

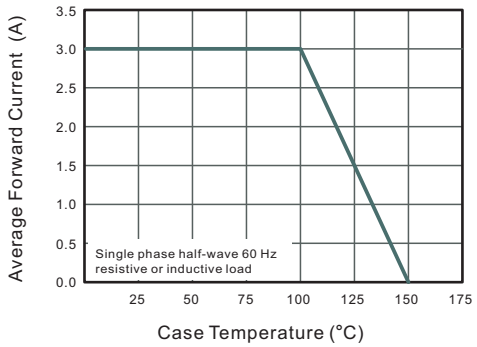


Fig.3 Typical Reverse Characteristics

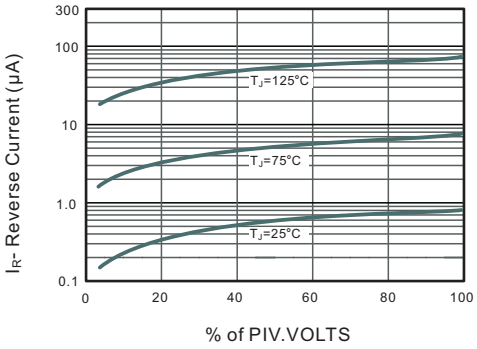


Fig.4 Typical Forward Characteristics

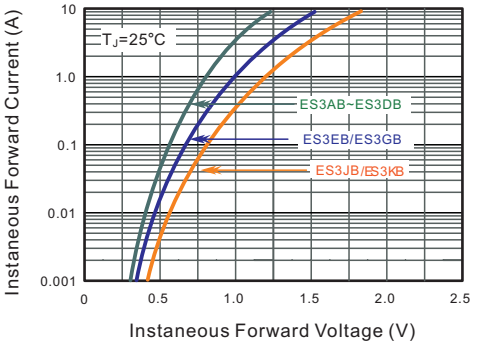


Fig.5 Typical Junction Capacitance

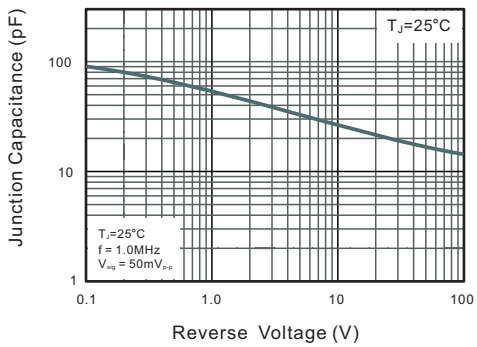
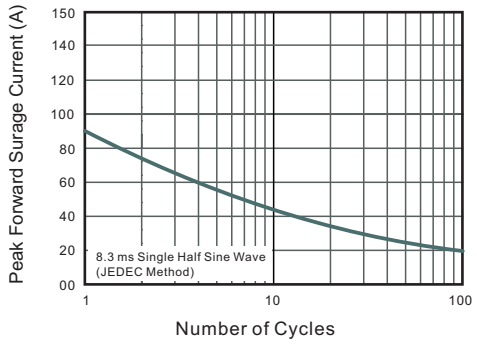


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current



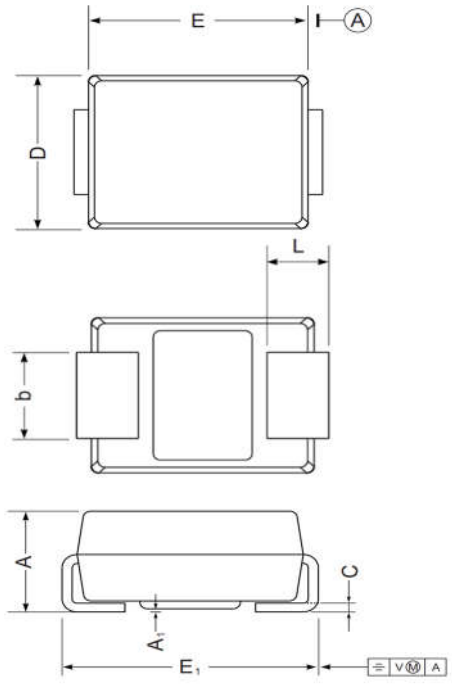
Marking Diagram

Ordering information

Package	Packing Description	Packing Quantity
DO-214AA SMB	Tape/Reel,13"reel	3000PCS/Reel 30000PCS/Carton

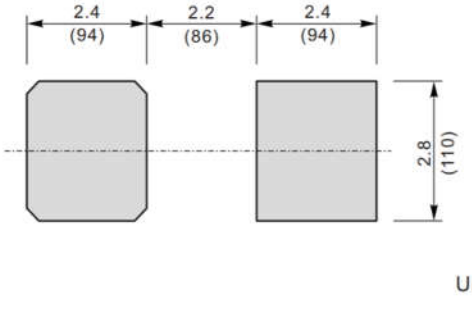
Package Dimensions

DO-214AA SMB



Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	2.13	2.44	84	96
E	4.06	4.70	160	185
D	3.3	3.94	130	155
E_1	5.08	5.59	200	220
A1	0.05	0.20	2.0	7.9
L	0.8	1.5	32	59
C	0.152	0.305	6	12
b	1.9	2.2	75	87

The recommended mounting pad size



Unit : mm (mil)

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