

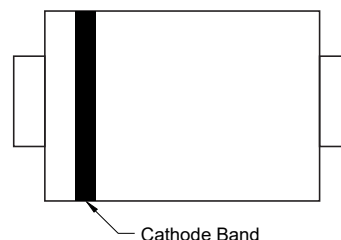
SURFACE MOUNT SUPER FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 5.0 Ampere

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Super fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

DO-214AA/SMB **RoHS**
COMPLIANT



Mechanical Data

Case : DO-214AA/SMB molded plastic body

Terminals :Solderable per MIL-STD-750,Method2026

Polarity : Cathode line denotes the cathode end

Position: Any

Approx. Weight : 0.1grams / 0.003oz

Equivalent circuit



Absolute 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	ES5AB	ES5BB	ES5CB	ES5DB	ES5EB	ES5GB	ES5JB	Units
Marking Code		ES5A	ES5B	ES5C	ES5D	ES5E	ES5G	ES5J	
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	I _{F(AV)}	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	100							A
Maximum Forward Voltage at 5.0 A	V _F	1				1.25		1.70	V
Maximum DC Reverse Current at Rated DC Blocking Voltage Ta = 25 °C Ta =125 °C	I _R	5 100							μA
Typical Junction Capacitance at VR=4V, f=1MHz	C _j	50							pF
Maximum Reverse Recovery Time (NOTE 1)	t _{rr}	35							ns
Typical Thermal Resistance (NOTE 2)	R _{θJA}	45							°C/W
	R _{θJC}	15							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

Note:1.Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A.

2.P.C.B. mounted with 1.0 X 1.0" (2.54 X 2.54 cm) copper pad areas.

Typical Characteristics

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

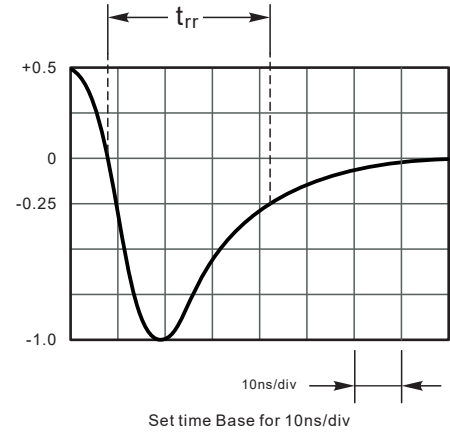
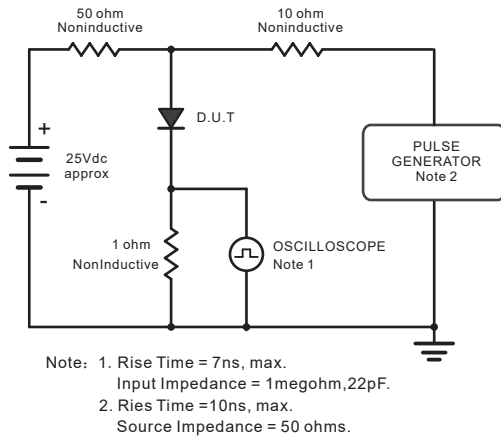


Fig.2 Maximum Average Forward Current Rating

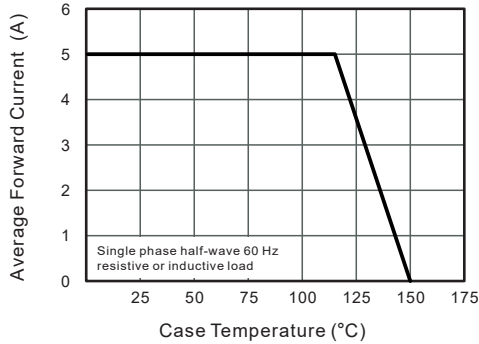


Fig.3 Typical Reverse Characteristics

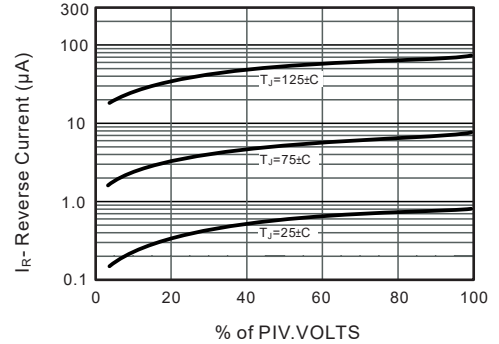


Fig.4 Typical Forward Characteristics

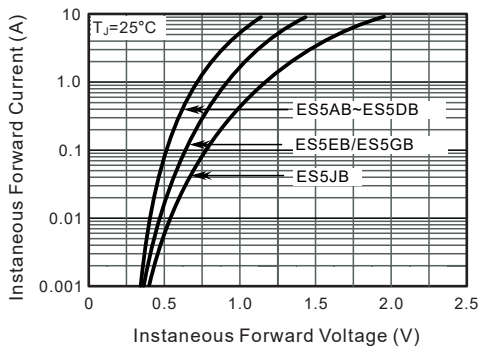


Fig.5 Typical Junction Capacitance

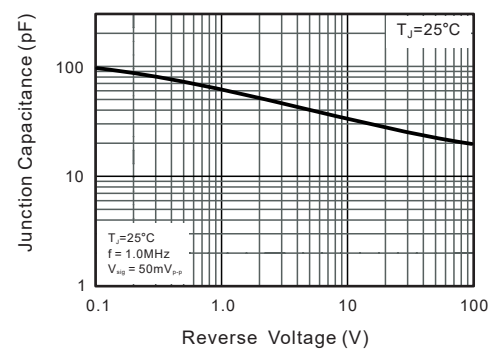
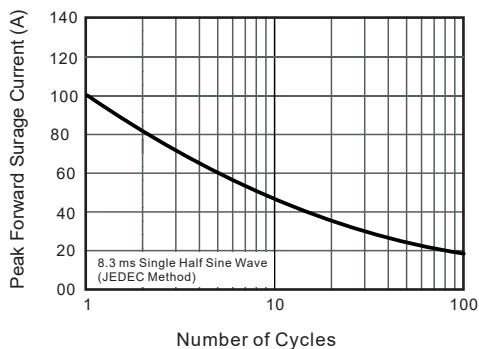
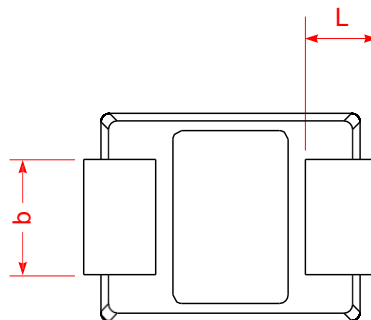
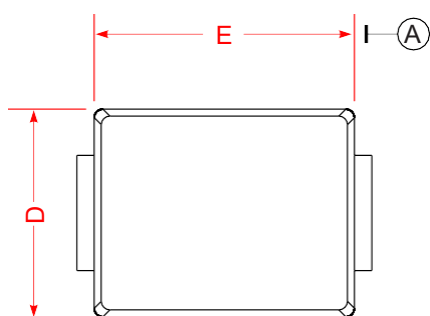
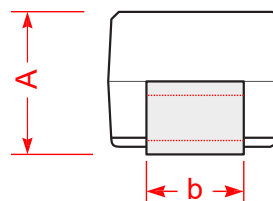
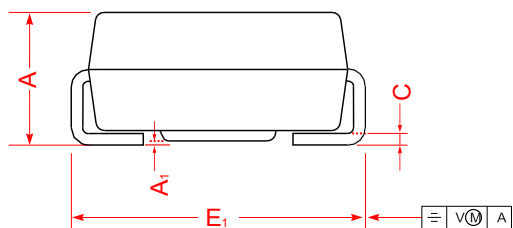


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

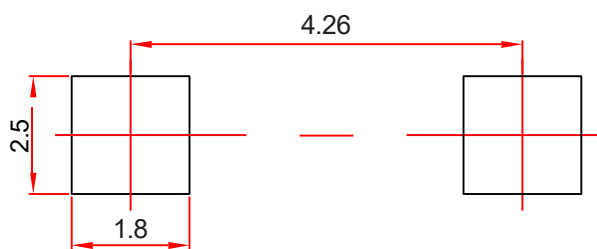


DO-214AA/SMB Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.13	2.44	0.084	0.096
C	0.15	0.31	0.006	0.012
D	3.30	3.95	0.130	0.156
E	4.06	4.70	0.160	0.185
E ₁	5.08	5.59	0.200	0.220
b	1.90	2.20	0.075	0.087
L	0.80	1.50	0.031	0.059
A ₁	0.2 REF		0.008 REF	

DO-214AA/SMB Suggested Pad Layout



Note:

1. Controlling dimension: in/millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.