

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 50--- 600 V

CURRENT: 5.0 A

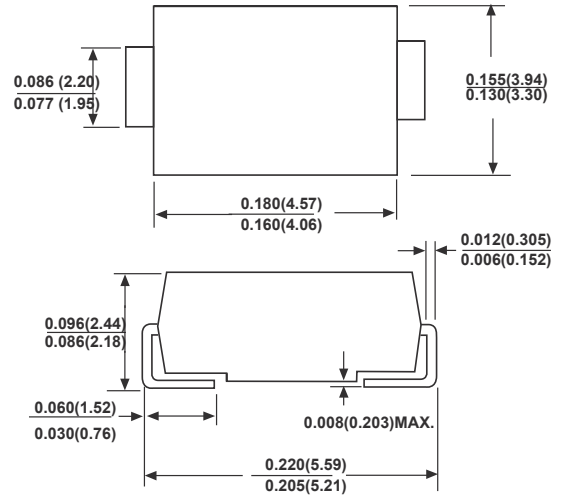
FEATURES

- 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

MECHANICAL DATA

- Case: SMB molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

SMB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted) Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate by 20%.

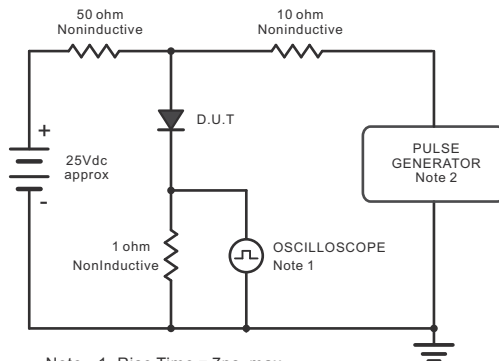
		ES5A	ES5B	ES5C	ES5D	ES5E	ES5G	ES5J	UNITS	
Maximum recurrent peak reverse voltage		V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage		V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage		V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current.375"(9.5mm) Lead Length at T _A =55℃		I _{F(AV)}	5.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I _{FSM}	100.0							A
Maximum Instantaneous Forward Voltage at 5.0A		V _F	1.0			1.25		1.7	V	
Maximum reverse current	@T _A =25℃	I _R	5.0							μA
at rated DC blocking voltage	@T _A =125℃		100.0							
Maximum reverse recovery time (Note1)		t _{rr}	35.0							ns
Typical Junction Capacitance at VR=4V, f=1MHz		C _J	50.0							pF
Typical thermal resistance(Note2)		R _{θJA}	40.0							℃/W
		R _{θJC}	15							
Operating and Storage Temperature Range		T _j , T _{slg}	-55 ~ +150							℃

Note: 1.Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

2.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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

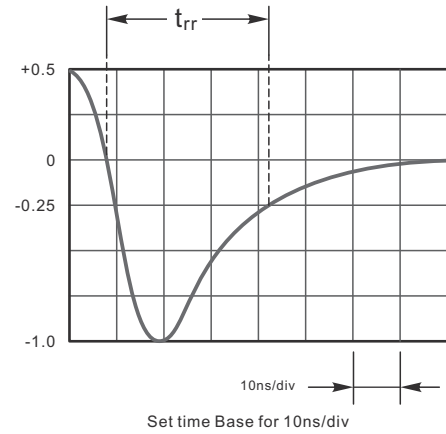


Fig.2 Maximum Average Forward Current Rating

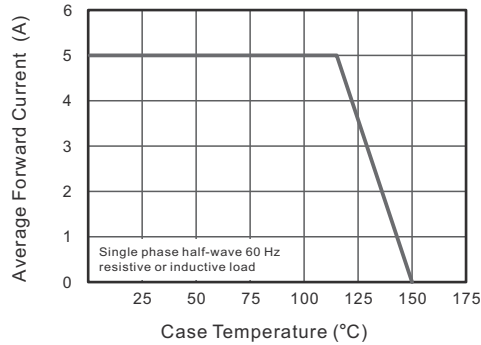


Fig.3 Typical Reverse Characteristics

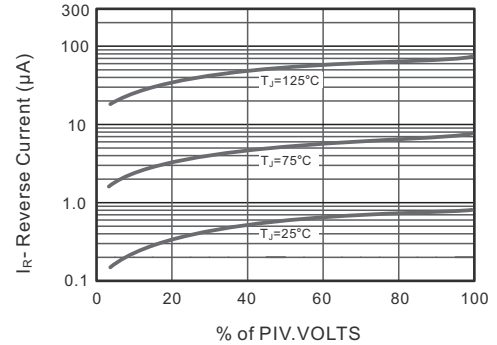


Fig.4 Typical Forward Characteristics

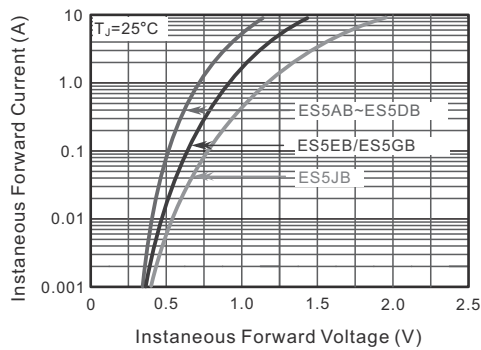


Fig.5 Typical Junction Capacitance

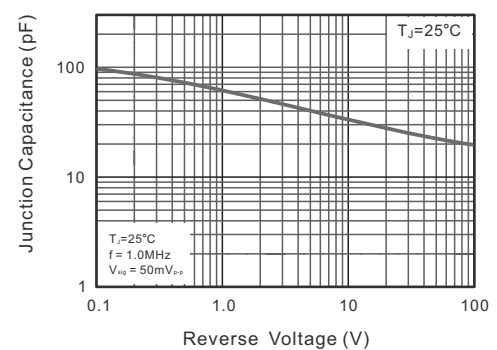


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

