

General Purpose Diode Surface Mount

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°C/10 seconds at terminals
- AEC-Q101 qualified



SMC

Mechanical Characteristics

- Case: SMC(DO-214AB) 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
- Weight: 0.0088 ounce, 0.25 grams

Absolute Maximum Ratings and Electrical Parameters (TA=25°C Unless otherwise specified)

PARAMETER	SYMBOL	S8AC	S8BC	S8DC	S8GC	S8JC	S8KC	S8MC	UNIT	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V	
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V	
Maximum average forward rectified current	I_{AV}	8							A	
Peak forward surge current ^(NOTE1)	I_{FSM}	200							A	
Maximum instantaneous forward voltage at 8A	V_F	1.1							V	
Maximum DC reverse current at rated DC blocking voltage	$T_A=25\text{ }^\circ\text{C}$	I_R	5							μA
	$T_A=100\text{ }^\circ\text{C}$	I_{RT}	50							μA
Typical junction capacitance ^(NOTE 2)	C_J	120							pF	
Typical Thermal Resistance Junction to Ambient ^(NOTE3)	$R_{\theta JA}$	55							$^\circ\text{C/W}$	
Typical Thermal Resistance Junction to Lead ^(NOTE3)	$R_{\theta JL}$	15							$^\circ\text{C/W}$	
Operating Temperature Range	T_J	-55 to 150							$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-55 to 150							$^\circ\text{C}$	

Note1: 8.3ms single half sine-wave superimposed on rated load

Note2: Measured at 1MHz and applied reverse voltage of 4.0V DC.

Note3: PCB. mounted with 16x16mm copper pad areas



S8AC~S8MC

Rating And Characteristic Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

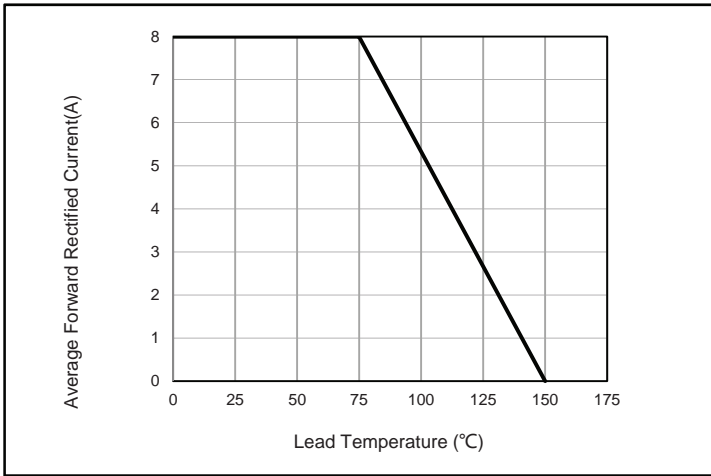


Fig. 1 - Forward Current Derating Curve

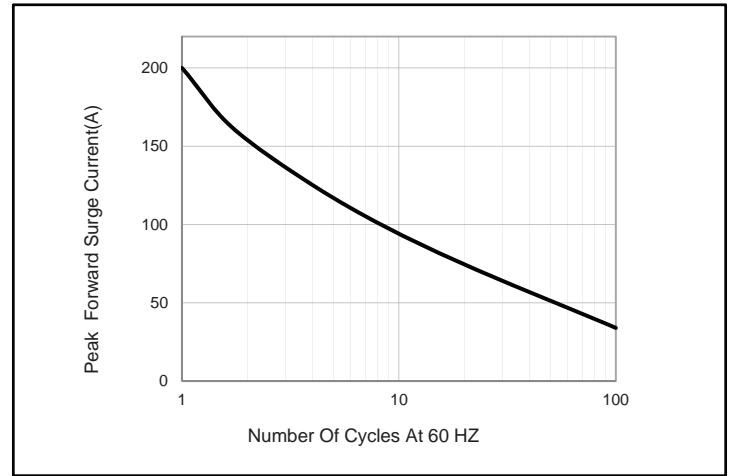


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

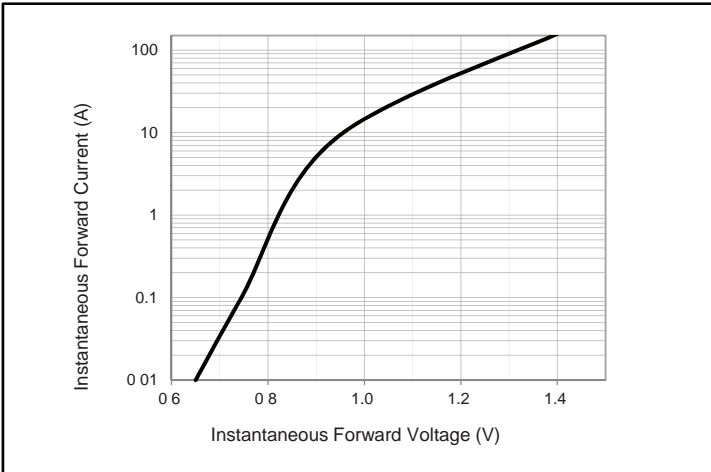


Fig. 3 - Typical Instantaneous Forward Characteristics

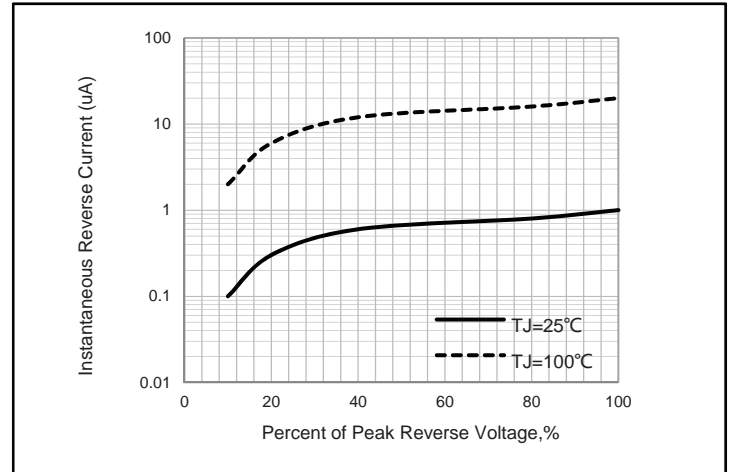


Fig. 4 - Typical Reverse Characteristics

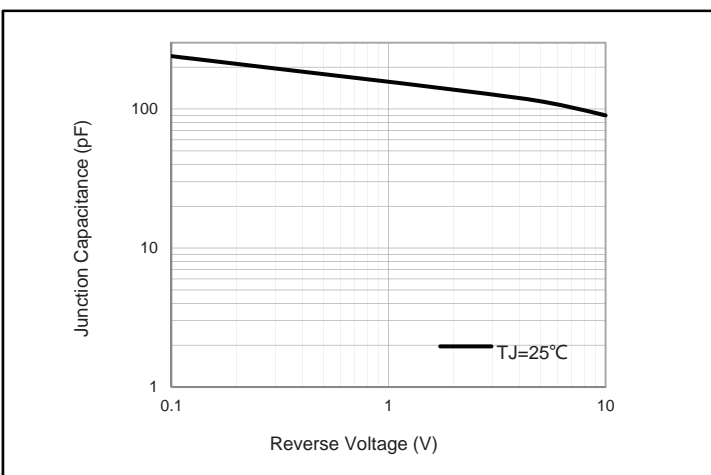


Fig. 5 - Typical Junction Capacitance

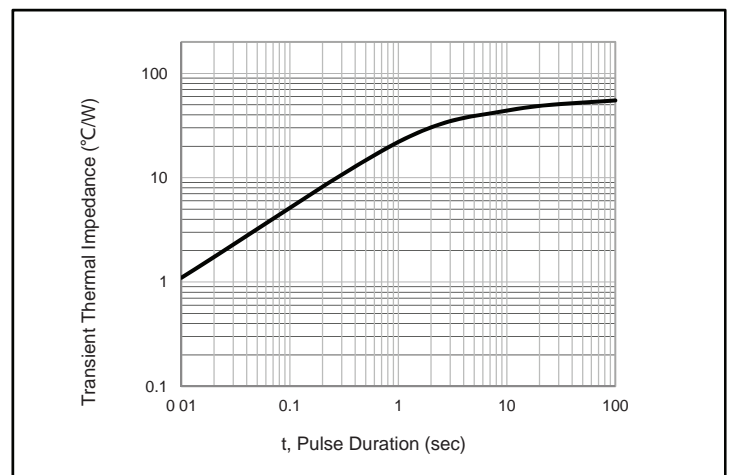


Fig. 6 - Typical Transient Thermal Impedance