



Features

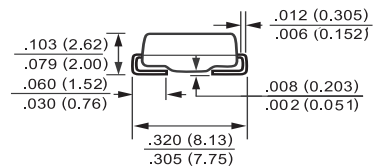
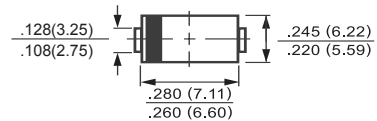
- Super fast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

Mechanical Data

- Case: DO-214AB (SMC) molded plastic body
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Lead formed for surface mount
- Mounting Position: Any



SMC (DO-214AB)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

Type Number	Symbol	ES 5A	ES 5B	ES 5C	ES 5D	ES 5F	ES 5G	ES 5H	ES 5J	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	5.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) @ $T_J = 100^\circ\text{C}$	I_{FSM}	150								A
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	0.95			1.3		1.7			V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_R					10				uA
						500				uA
Maximum Reverse Recovery Time (Note 1)	T_{rr}					35				nS
Typical Junction Capacitance (Note 2)	C_j	45			30					pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$					47				°C /W
	$R_{\theta JL}$					12				
Operating Temperature Range	T_J					-55 to +150				°C
Storage Temperature Range	T_{STG}					-55 to +150				°C

- Notes:
1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $IRR=0.25A$
 2. Measured at 1 MHz and Applied $V_R=4.0$ Volts
 3. Units Mounted on P.C.B. with 0.6" x 0.6"(16mm x 16mm) Copper Pad Areas



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

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

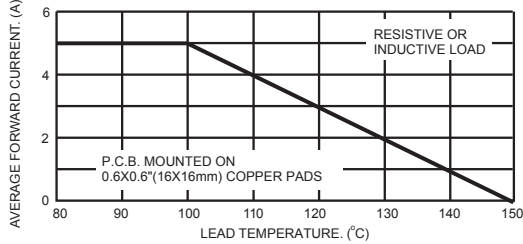


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

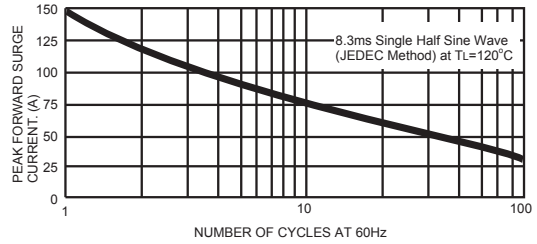


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

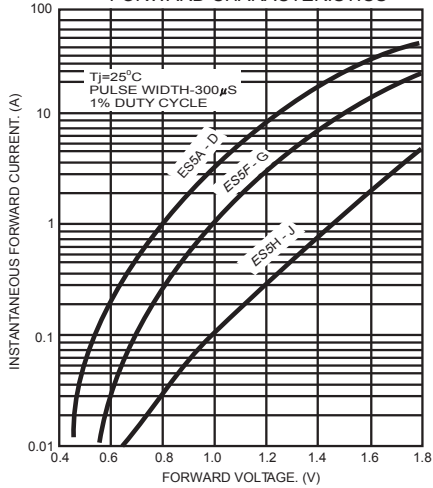


FIG.4- TYPICAL REVERSE CHARACTERISTICS

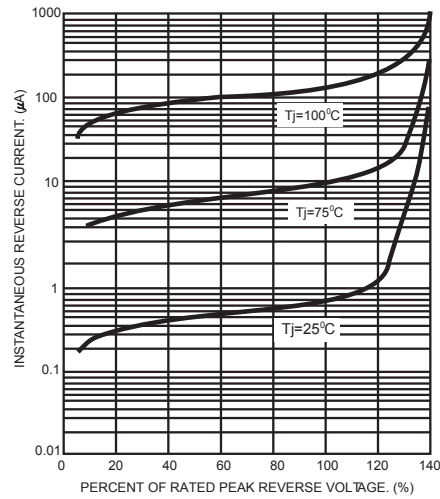


FIG.5- TYPICAL JUNCTION CAPACITANCE

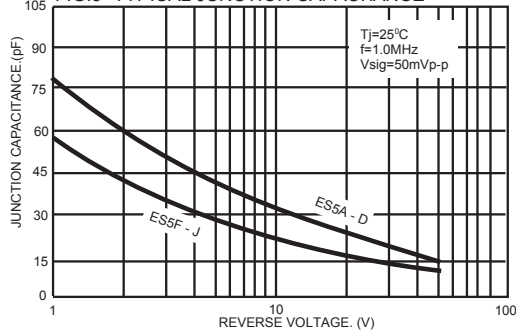


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE

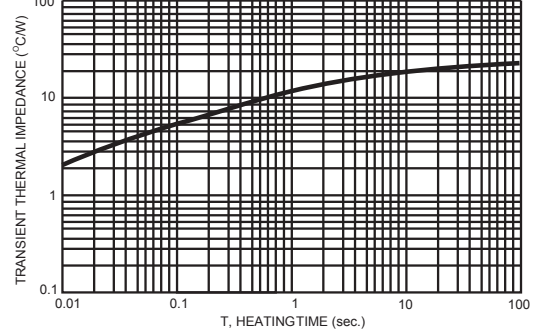


FIG.7- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

