



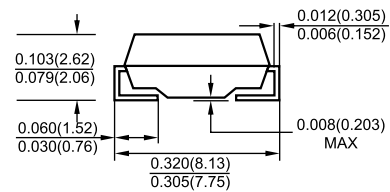
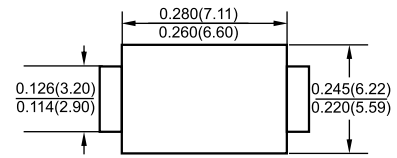
SMC/DO-214AB

Features

- ✧ Low cost
- ✧ Low leakage
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ Easily cleaned with Alcohol, Isopropanol and similar solvents
- ✧ The plastic material carries U/L recognition 94V-0

Mechanical Data

- ✧ Case: JEDEC DO-214AB, molded plastic
- ✧ Polarity: Color band denotes cathode
- ✧ Weight: 0.007 ounces, 0.21 grams
- ✧ Mounting position: Any



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

Parameter	Symbol	US5AC	US5BC	US5DC	US5GC	US5JC	US5KC	US5MC	UNITS
Marking code		US5A	US5B	US5D	US5G	US5J	US5K	US5M	
Maximum recurrent 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 @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$	5.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	200							A
Maximum instantaneous forward voltage at 5.0 A	V_F	1.0		1.3		1.7		V	
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	I_R	10 300							μA
Typical reverse recovery time (Note1)	t_{rr}	50				75			ns
Typical junction capacitance (Note2)	C_J	15				12			pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	15							$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ---- + 150							$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150							$^\circ\text{C}$

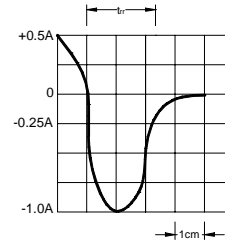
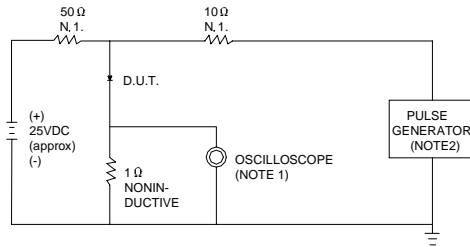
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

2. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.



Ratings AND Characteristic Curves

FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.
2. RISE TIME = 10ns MAX.SOURCE IMPEDANCE = 50 Ω.

SET TIME BASE FOR 20/30 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

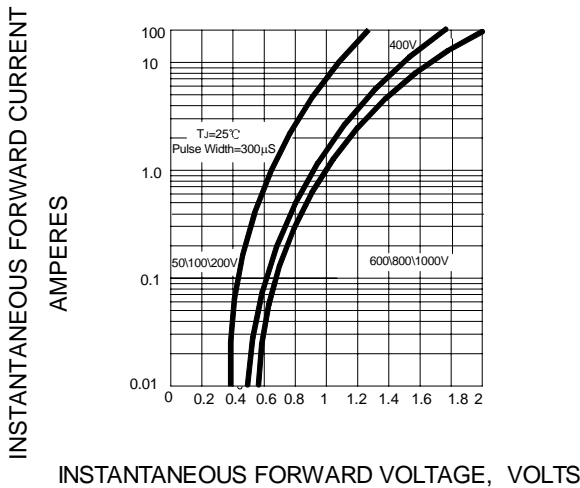


FIG.3 – FORWARD DERATING CURVE

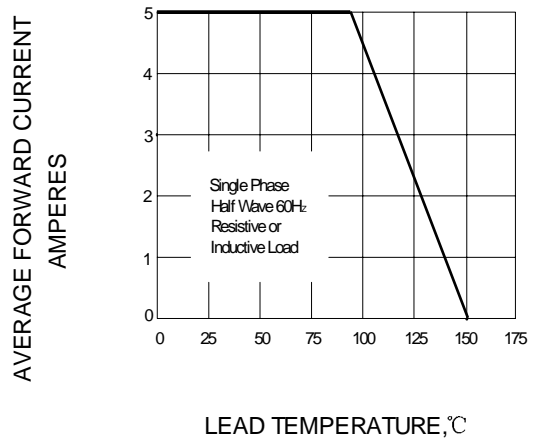


FIG.4 – TYPICAL JUNCTION CAPACITANCE

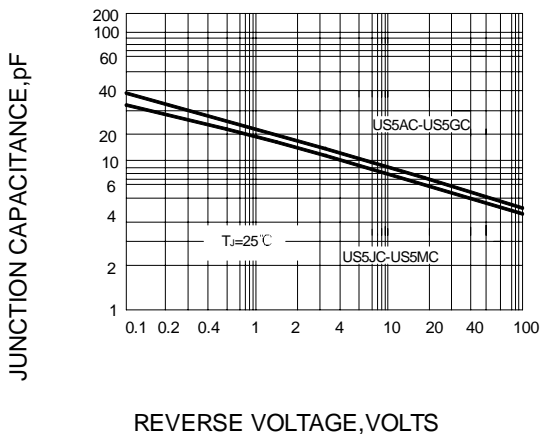
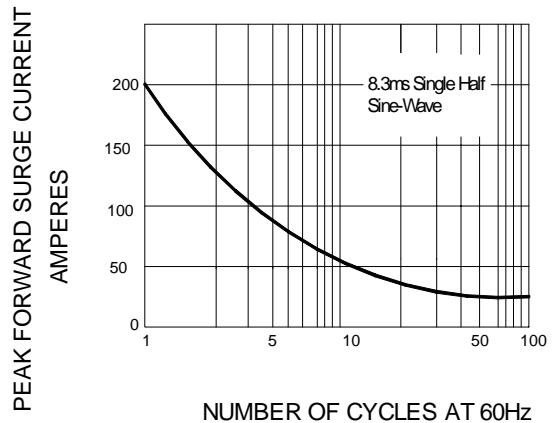


FIG.5 – PEAK FORWARD SURGE CURRENT



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMC	3000/REEL	42000	36X36X36.5	18.50	15.50