

Surface Mount Rectifiers

VOLTAGE RANGE: 50 --- 600 V

CURRENT: 4.0 A



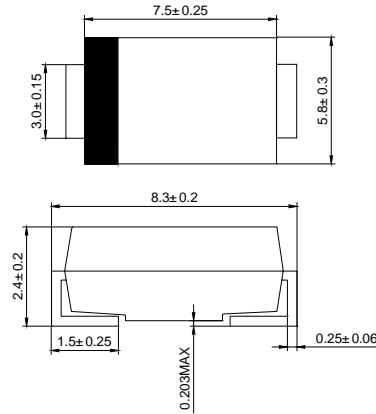
Features

- ◇ Low cost
- ◇ Glass passivated chip junction
- ◇ 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 SMC, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.007 ounces, 0.21 grams
- ◇ Mounting position: Any

SMC(DO-214AB)



Dimensions in 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	MURS	MURS	MURS	MURS	MURS	MURS	MURS	MURS	UNITS
		405C	410C	415C	420C	430C	440C	450C	460C	
Marking code		MURS 405	MURS 410	MURS 415	MURS 420	MURS 430	MURS 440	MURS 450	MURS 460	
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 @ $T_A=75^\circ C$	$I_{F(AV)}$	4.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	125.0								A
Maximum instantaneous forward voltage @ 4.0A	V_F	0.89				1.28				V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=125^\circ C$	I_R					10.0 100.0				μA
Maximum reverse recovery time (Note1)	t_{rr}	25				50				ns
Typical junction capacitance (Note2)	C_J					95				pF
Typical thermal resistance (Note3)	$R_{\theta JA}$					20				$^\circ C/W$
Operating junction temperature range	T_J	- 55 ----- + 150								$^\circ C$
Storage temperature range	T_{STG}	- 55 ----- + 150								$^\circ C$

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

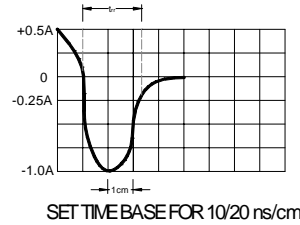
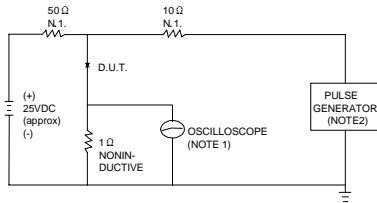
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance from junction to ambient.



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.

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

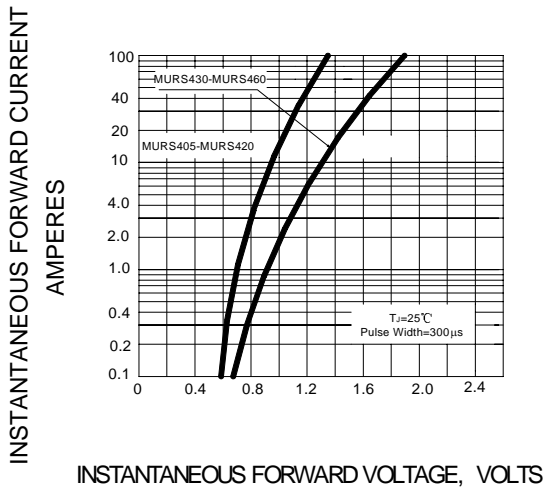


FIG.3 – TYPICAL REVERSE CHARACTERISTIC

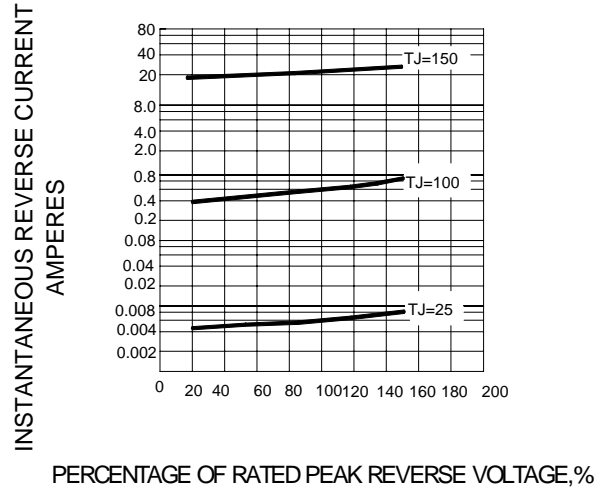


FIG.4 – TYPICAL JUNCTION CAPACITANCE

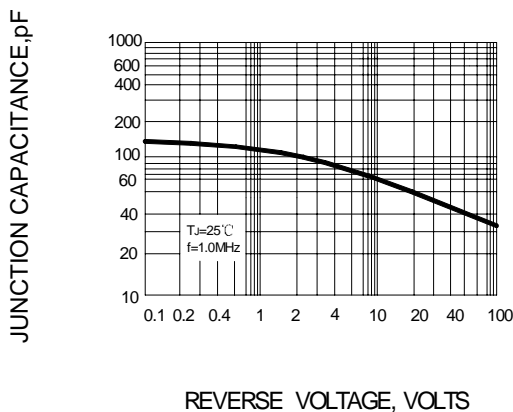
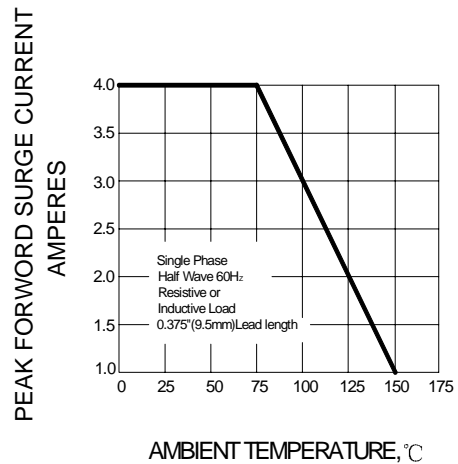


FIG.5 – FORWARD DERATING CURVE



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