

30BQ040

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

PRV : 40 Volts

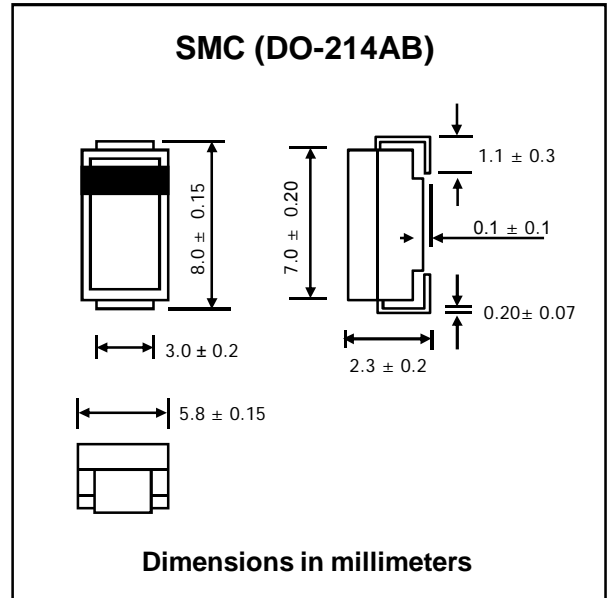
I_o : 3 Ampere

FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * High efficiency
- * Low power loss
- * Low forward voltage drop
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SMC Molded plastic
- * Epoxy : UL94V-0 rate flame retardant
- * Lead : Lead Formed for Surface Mount
- * Polarity : Color band denotes cathode end except Bipolar.
- * Mounting position : Any
- * Weight : 0.21 gram



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%.

RATING	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	40	V
Maximum DC Blocking Voltage	V _{DC}	40	V
Maximum Average Forward Current (Note 1)	I _{F(AV)}	3.0	A
Maximum Peak One Cycle Non-Repetitive Surge Current, Following any Rated Load Condition, 10ms	I _{FSM}	110	A
Maximum Forward Voltage Drop (Note 2) (@ I _F = 3.0 A , T _J = 25°C) (@ I _F = 6.0 A , T _J = 125°C)	V _F	0.53 0.68	V
Maximum Reverse Current at T _J = 25°C	I _R	0.5	mA
Rated DC Blocking Voltage (Note 2) T _J = 125°C	I _{R(H)}	30	
Maximum Junction Capacitance V _R = 5V _{DC} , (test signal range 100 KHz to 1MHz)	C _T	230	pF
Maximum Thermal Resistance, Junction to Ambient	R _{θJA}	46	°C/W
Junction Temperature Range	T _J	- 55 to + 150	°C
Storage Temperature Range	T _{STG}	- 55 to + 150	°C

Notes :

(1) 50% Duty Cycle, @T_L = 118 °C, Rectangular waveform

(2) Pulse Test : Pulse Width = 300 μs, Duty Cycle < 2%.

RATING AND CHARACTERISTIC CURVES (30BQ040)

FIG.1 - FORWARD CURRENT DERATING CURVE

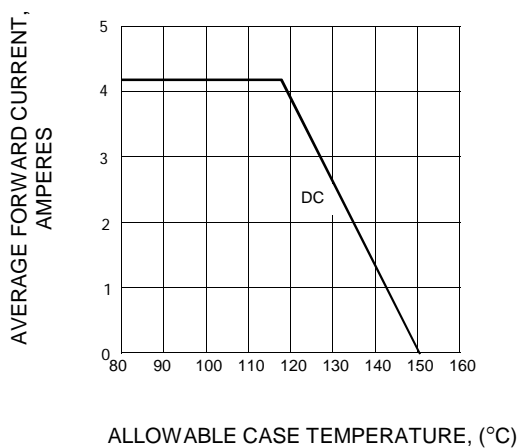


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

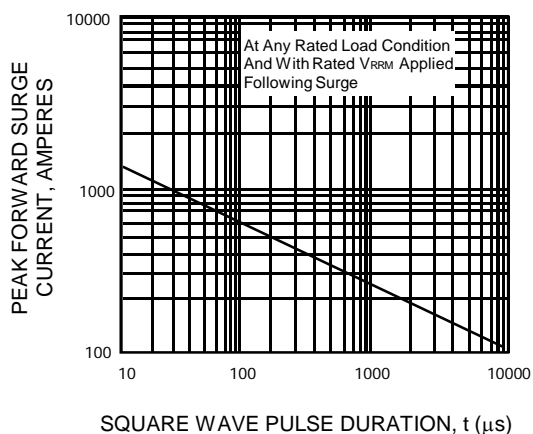


FIG.3 - MAXIMUM FORWARD CHARACTERISTICS

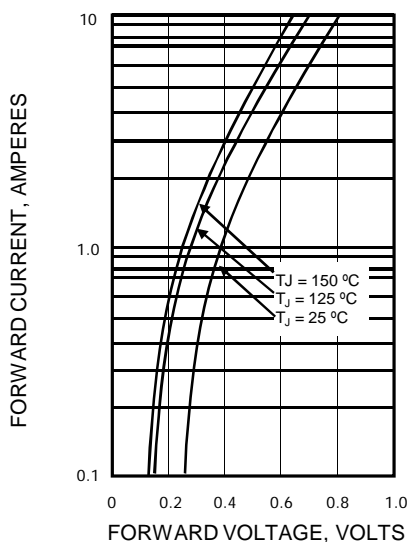


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

