

10BQ040

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

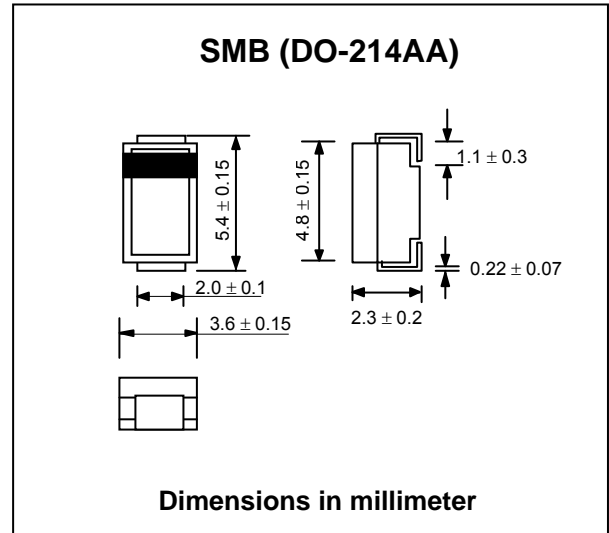
PRV : 40 Volts
I_o : 1.0 Ampere

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 : SMB Molded plastic
- * Epoxy : UL94V-0 rate flame retardant
- * Lead : Lead Formed for Surface Mount
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.1079 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specific.
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)	$I_{F(AV)}$	1.0	A
Maximum Peak One Cycle Non-Repetitive Surge Current, Following any Rated Load Condition, 10ms	I_{FSM}	45	A
Maximum Forward Voltage Drop (Note 2) (@ $I_F = 1.0$ A , $T_J = 25^\circ\text{C}$) (@ $I_F = 2.0$ A , $T_J = 125^\circ\text{C}$)	V_F	0.53 0.70	V
Maximum Reverse Current at Rated DC Blocking Voltage (Note 2)	I_R $I_{R(H)}$	0.1 4.0	mA
Maximum Junction Capacitance $V_R = 5V_{DC}$, (test signal range 100 KHz to 1MHz)	C_T	80	pF
Maximum Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	140	°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, @ $T_C = 112^\circ\text{C}$, Rectangular waveform
- (2) Pulse Test : Pulse Width = 300 μs , Duty Cycle < 2%.

RATING AND CHARACTERISTIC CURVES (10BQ40)

FIG.1 - FORWARD CURRENT DERATING CURVE

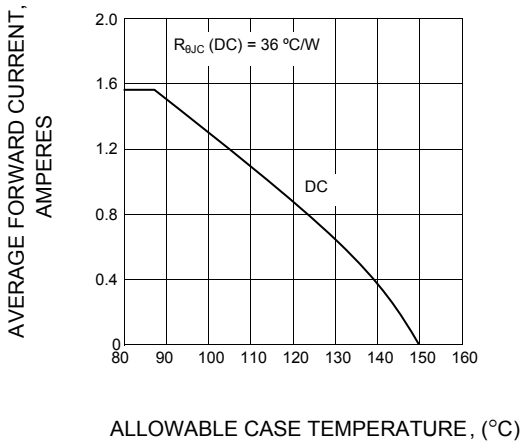


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

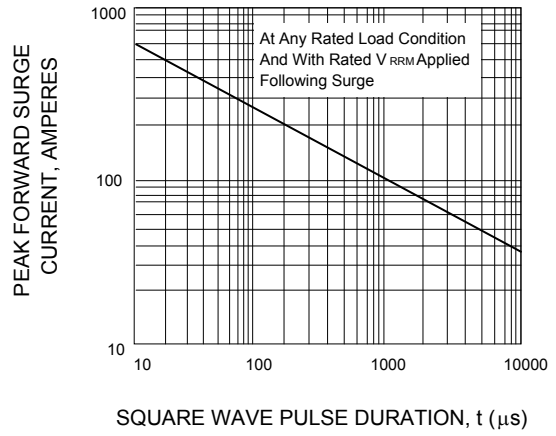


FIG.3 - MAXIMUM FORWARD CHARACTERISTICS

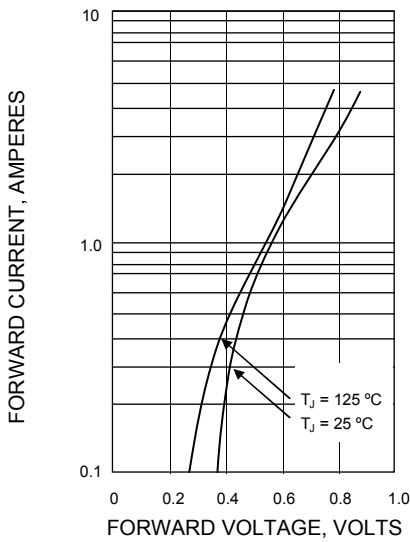


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

