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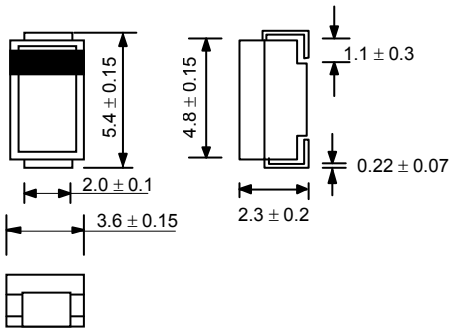
10BQ040

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

PRV : 40 Volts
I_O : 1.0 Ampere

SMB (DO-214AA)



Dimensions in millimeter

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 specifie.
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 = 25ºC) (@ I_F = 2.0 A , TJ = 125ºC)	V_F	 0.53 0.70	V
Maximum Reverse Current at T_J = 25ºC	I_R	0.1	mA
Rated DC Blocking Voltage (Note 2) T_J = 125ºC	$I_{R(H)}$	4.0	
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	ºC/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 ºC, Rectangular waveform

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

RATING AND CHARACTERISTIC CURVES (10BQ040)

FIG.1 - FORWARD CURRENT DERATING CURVE

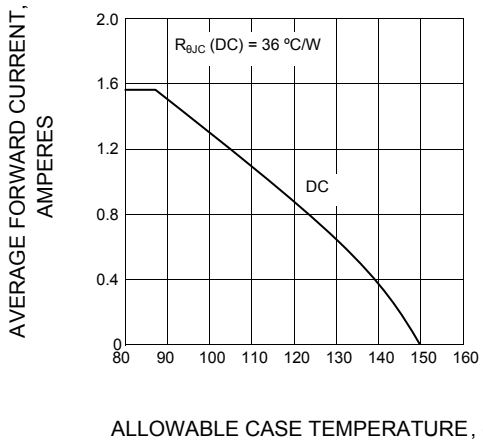


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

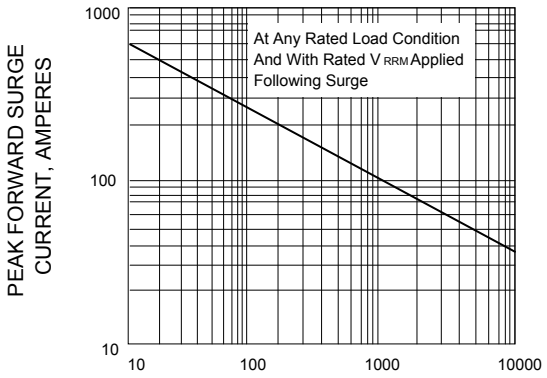


FIG.3 - MAXIMUM FORWARD CHARACTERISTICS

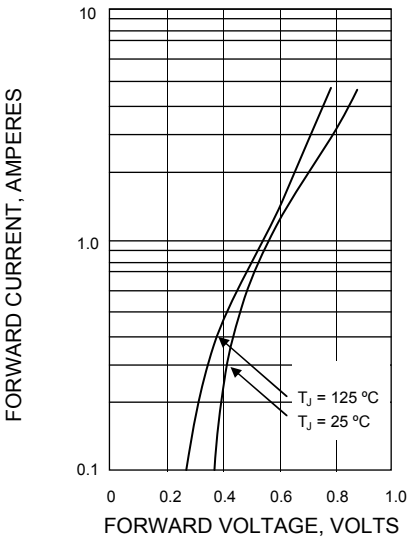


FIG.4 - TYPICAL REVERSE CHARACTERISTICS