DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SQ1030 THRU SQ10100

TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE - 30 to 100 Volts *CURRENT - 10 Amperes*

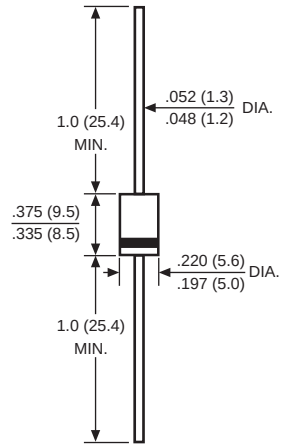
FEATURES

* Low power loss
* Low forward voltage
* High current capability
* High efficiency
* High surge capability
* Guard ring for transient protection
* For use in low voltage, high frequency inventers, free wheeling, and polarity protection applications

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 1.18 gram

DO-27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

		SYMBOL	SQ1030	SQ1035	SQ1040	SQ1045	SQ1050	SQ1060	SQ1080	SQ10100	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	30	35	40	45	50	60	80	100	Volts
Maximum RMS Voltage		V_{RMS}	21	24.5	28	31.5	35	42	56	70	Volts
Maximum DC Blocking Voltage		V_{DC}	30	35	40	45	50	60	80	100	Volts
Maximum Average Forward Rectified Current .375*(9.5mm) lead length		I_O	10								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	275								Amps
Maximum Instantaneous Forward Voltage at 10A DC		V_F	.55				.70		.80		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	0.5								mAmps
	@T_A = 100°C		50								
Typical Thermal Resistance (Note 1)		$R_{\theta JC}$	3.0								°C/W
Typical Junction Capacitance (Note 2)		C_J	450								pF
Storage and Operating Temperature Range		T_J, T_{STG}	-55 to +200								°C

NOTES : 1. Thermal Resistance Junction to case.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (SQ1030 THRU SQ10100)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

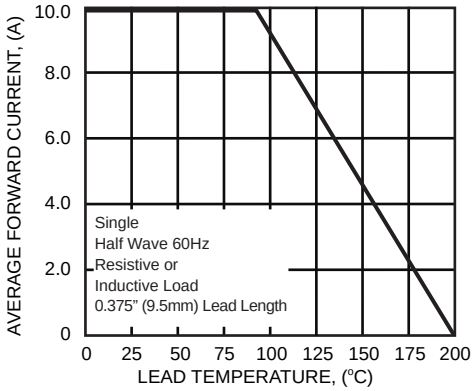


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

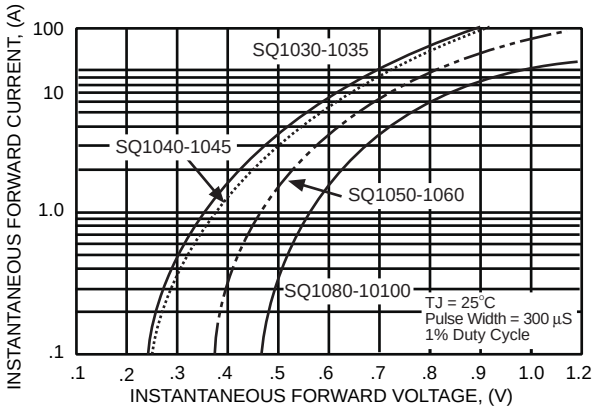


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

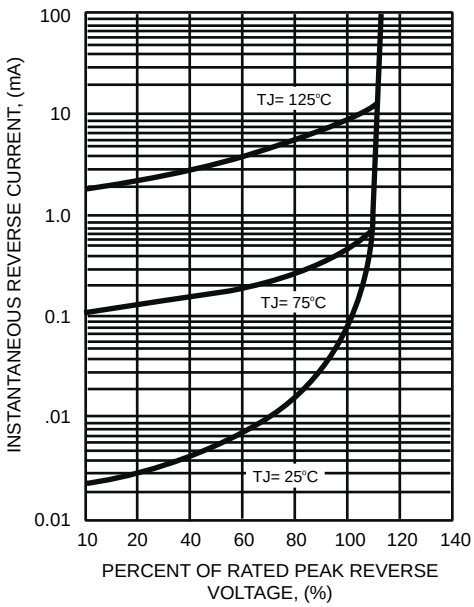


FIG. 4 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

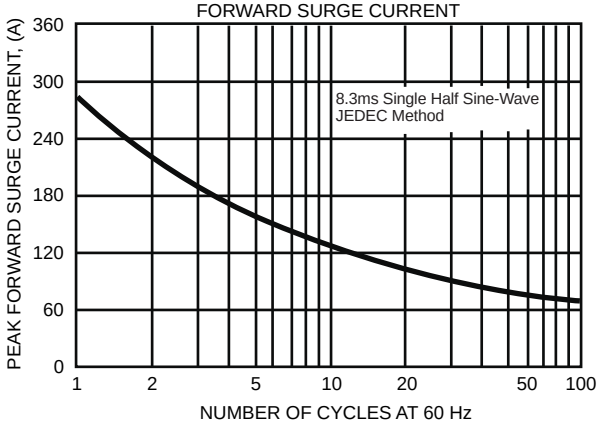


FIG. 5 - TYPICAL JUNCTION CAPACITANCE