DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

10SQ030 THRU 10SQ100

TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER

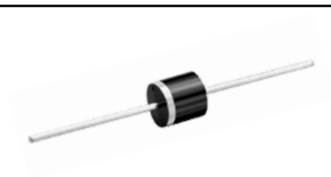
VOLTAGE RANGE - 30 to 100 Volts *CURRENT - 10 Amperes*

FEATURES

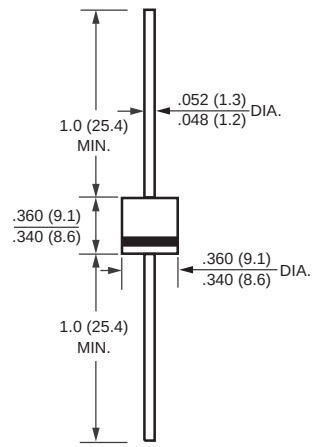
* Low power loss
* Low forward voltage
* High current capability
* High efficiency
* High surge capability
* Guard ring for transient protection
* For use in low voltage, high frequency inventers, free wheeling, and polarity protection applications

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: 2.08 gram



R-6



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Rating at 25°C ambient tempature unless ohterwise specified
Single phase, half wave 60 HZ, resistive or inductive load.
For capacitive load, derate current by 20%.

		SYMBOL	10SQ030	10SQ040	10SQ050	10SQ060	10SQ080	10SQ100	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	30	40	50	60	80	100	Volts
Maximum RMS Voltage		V_{RMS}	21	28	35	42	56	70	Volts
Maximum DC Blocking Voltage		V_{DC}	30	40	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	@T_A = 25°C	I_R	0.5						mAmps
at Rated DC Blocking Voltage	@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 (10SQ030 THRU 10SQ100)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

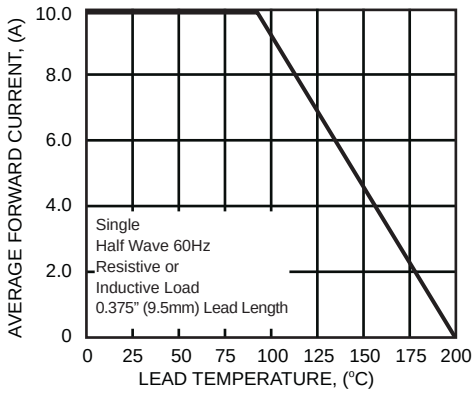


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

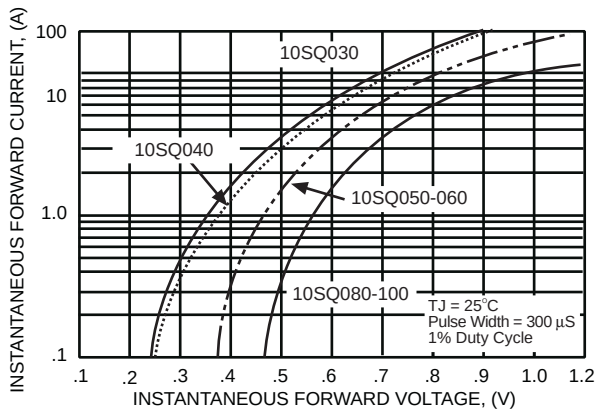


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

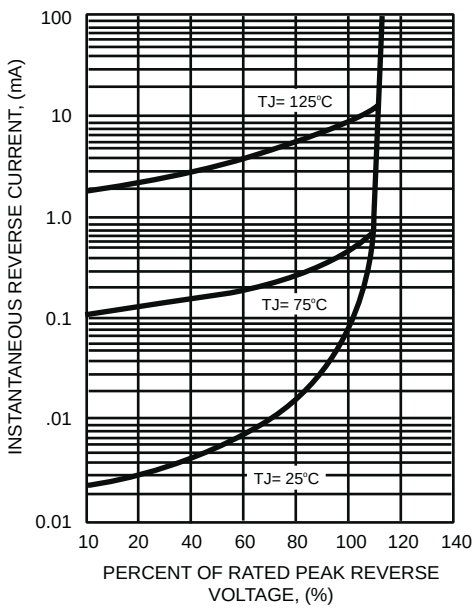


FIG. 4 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

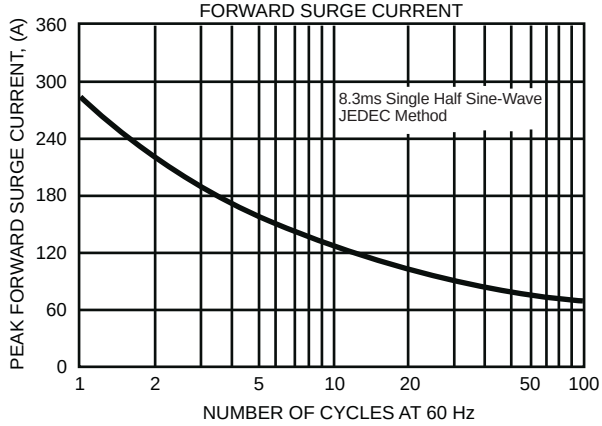
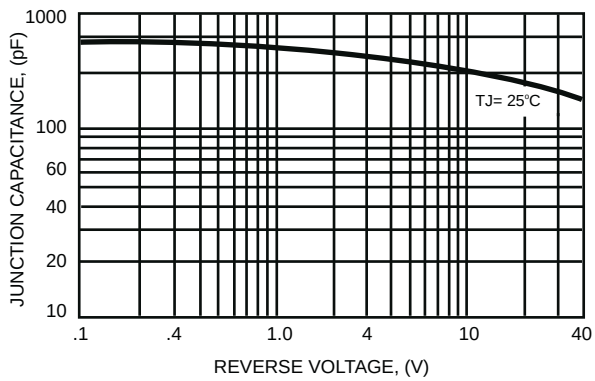


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



Disclaimer

Any Customer or user of this document or products described herein in such applications shall assume all risks of such use and will agree to hold *DC COMPONENTS* are harmless against all damages.

DC COMPONENTS disclaims any and all liability arising out of the application or use of any product, including consequential or incidental damages. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

DC COMPONENTS reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to this document and any product described herein , and disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Unless otherwise in writing, *DC COMPONENTS* products are intended for use as general electronic components in standard applications (eg: Consumer electronic, Computer equipment, Office equipment, etc.), and not recommended for use in a high specific application where a failure or malfunction of the device could result in human injury or death (eg: Aerospace equipment, Submarine cables, Combustion equipment, Safety devices, Life support systems, etc.)

Customers using or selling *DC COMPONENTS* products not expressly indicated for use in such applications do so at their own risk. If customer intended to use *DC COMPONENTS* standard quality grade devices for applications not envisioned by *DC COMPONENTS*, please contact our sales representatives in advance.