

# 10SQ020 THRU 10SQ100

## Schottky Barrier Rectifiers

Reverse Voltage - 20 to 100 V

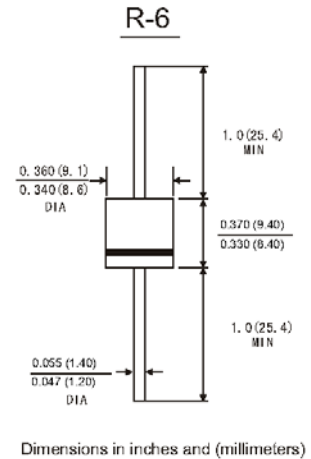
Forward Current - 10 A

### Features

- Metal-Semiconductor junction with guard ring
- Low forward voltage drop, low switching losses
- High surge capability
- High current capability, low forward voltage

### Mechanical Data

- Case: Molded plastic, R-6
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Axial leads, solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting Position: Any



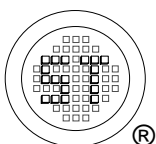
Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings 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%.

Parameter	Symbols	10SQ	10SQ	10SQ	10SQ	10SQ	10SQ	10SQ	10SQ	Units
		020	030	040	045	050	060	090	100	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	45	50	60	90	100	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	32	35	42	63	70	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	45	50	60	90	100	V
Maximum Average Forward Rectified Current at $T_A = 25\text{ }^\circ\text{C}$	$I_{F(AV)}$	10								A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	150								A
Maximum Forward Voltage at 10 A	$V_F$	0.55			0.7		0.85			V
Maximum Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_j = 25\text{ }^\circ\text{C}$			0.5		$T_j = 100\text{ }^\circ\text{C}$			mA
Typical Thermal Resistance <sup>1)</sup>	$R_{\theta JL}$	14								$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_j$	- 55 to + 150								$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150								$^\circ\text{C}$

<sup>1)</sup> Thermal resistance from junction to lead.



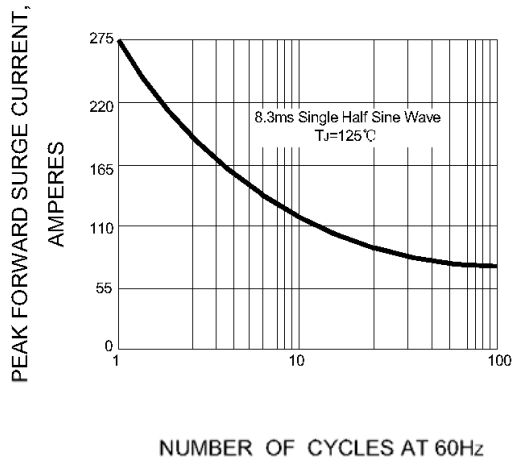
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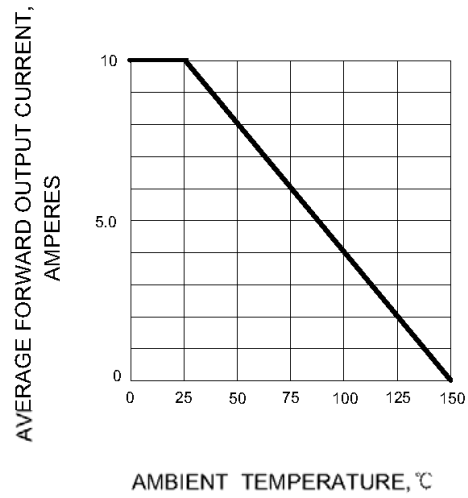


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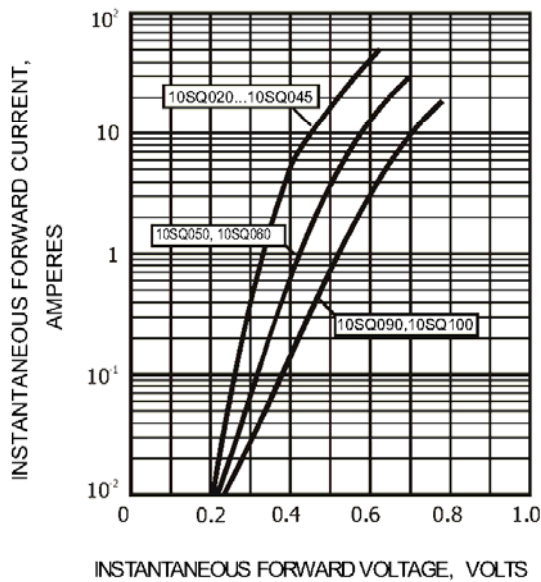
**FIG.1 -- PEAK FORWARD SURGE CURRENT**



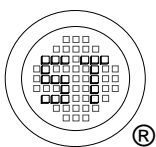
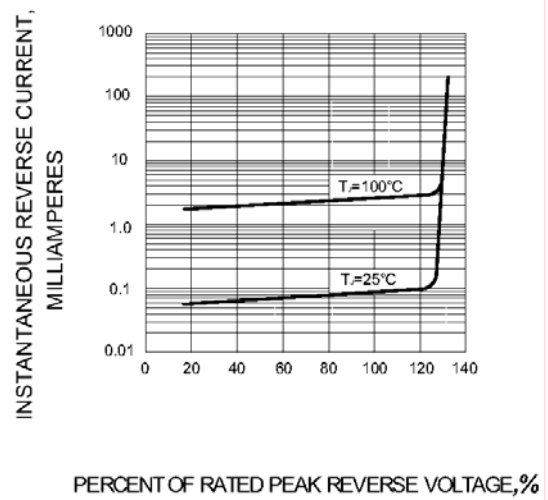
**FIG.2 -- FORWARD DERATING CURVE**



**FIG.3 -- TYPICAL FORWARD CHARACTERISTIC**



**FIG.4 -- TYPICAL REVERSE CHARACTERISTIC**



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