Kingtronics®

# 10SQ030 THRU 10SQ100

SCHOTTKY BARRIER RECTIFIERS

**REVERSE VOLTAGE** 30 to 100 Volts **FORWARD CURRENT** 10.0 Ampere

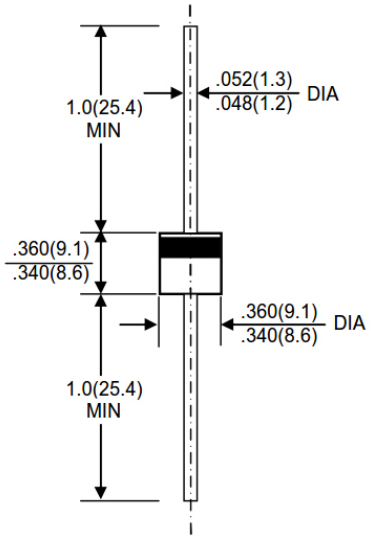
## FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

## MECHANICAL DATA

- Case: JEDEC R-6 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.07 ounces , 2.1 grams
- Mounting position: Any

## R-6




**Dimensions in inches and (millimeters)**

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| | SYMBOL | 10SQ 030 | 10SQ 035 | 10SQ 040 | 10SQ 045 | 10SQ 050 | 10SQ 060 | 10SQ 080 | 10SQ 100 | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 30 | 35 | 40 | 45 | 50 | 60 | 80 | 100 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 21 | 24.5 | 28 | 31.5 | 35 | 42 | 56 | 70 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 30 | 35 | 40 | 45 | 50 | 60 | 80 | 100 | V |
| Maximum Average Forward Rectified Current @ $T_C$=95℃ | $I_{(AV)}$ | 10 | | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC Method) | $I_{FSM}$ | 250 | | | | | | | | A |
| Peak Forward Voltage at 10A DC(Note1) | $V_F$ | 0.55 | | | | 0.7 | | 0.8 | | V |
| Maximum DC Reverse Current @$T_j$=25℃<br>at Rated DC Blocking Voltage @$T_j$=100℃ | $I_R$ | 0.5<br>50 | | | | | | | | mA |
| Typical Junction Capacitance (Note2) | $C_J$ | 450 | | | | | | | | PF |
| Typical Thermal Resistance (Note3) | $R_{\theta JC}$ | 3.0 | | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -55 to +150 | | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | | ℃ |

1- 300us Pulse Width, 2%Dudy Cycle
2- Measured at 1.0 MHZ and applied reverse voltage of 4.0VDC
3- Thermal Resistance Junction to Case

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## RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

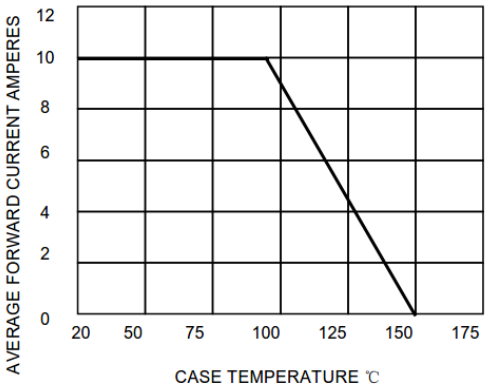



FIG.2-MAXIMUM NON-REPETITVE SURGE

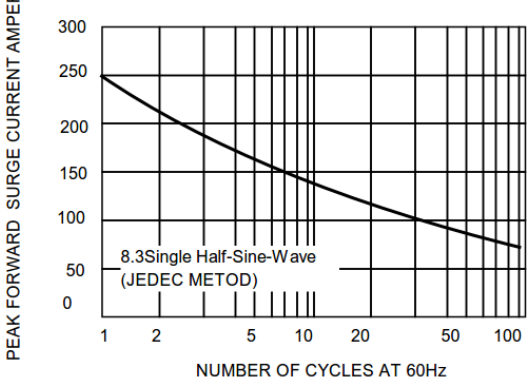



FIG.3-TYPICAL REVERSE CHARACTERISTICS

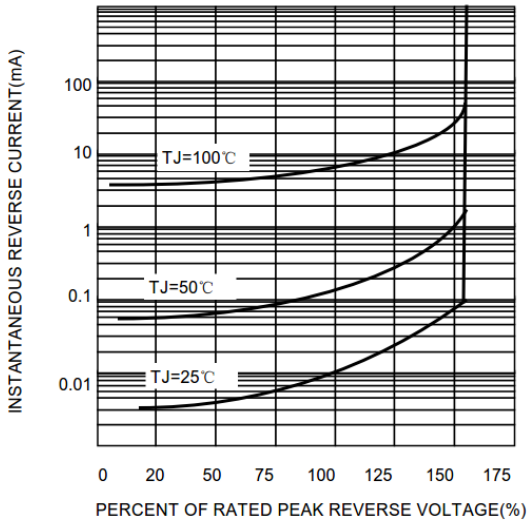



FIG.4-TYPICAL FORWARD CHARACTERISTICS

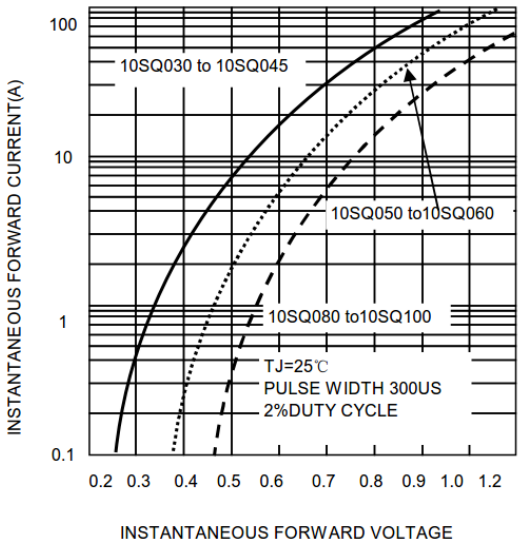
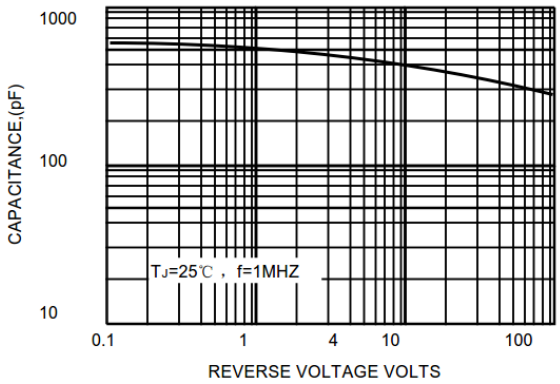



FIG.5-TYPICAL JUNCTION CAPACITANCE




Note: Specifications are subject to change without notice.