

6 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

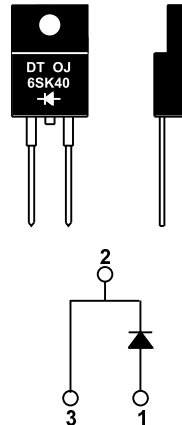
RoHS COMPLIANT

MECHANICAL DATA

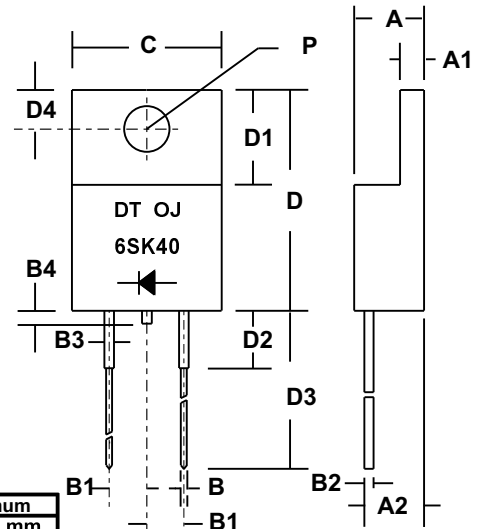
- Case: TO-220 molded epoxy (Fully Insulated) (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.7 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AC PACKAGE



FULLY INSULATED PACKAGE



ITO - 220AC

SERIES 6SK40 - 6SK100

| Sym | Minimum | | Maximum | |
|-----|---------|-------|---------|------|
| | in | mm | in | mm |
| A | | | 0.187 | 4.75 |
| A1 | 0.121* | 4.75* | | |
| A2 | 0.14* | 3.56* | | |
| B | 0.035 | 0.9 | 0.043 | 1.1 |
| B1 | 0.09 | 2.3 | 0.102 | 2.6 |
| B2 | 0.025* | 0.64* | | |
| B3 | 0.050* | 1.27* | | |
| B4 | | | 0.04 | 1.0 |
| C | | | 0.413 | 10.5 |
| D | 0.59 | 15.0 | 0.61 | 15.5 |
| D1 | 0.262* | 6.6* | | |
| D2 | | | 0.16 | 4.0 |
| D3 | 0.54 | 13.7 | 0.60 | 15.2 |
| D4 | 0.108* | 2.75* | | |
| P | 0.126* | 3.2* | | |

* These dimensions are "Typicals".

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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

| PARAMETER (TEST CONDITIONS) | SYMBOL | RATINGS | | | | | UNITS |
|--|-----------------------------------|---------------------------------|-------|-------|----------------------------------|--------|-------|
| | | 6SK40 | 6SK50 | 6SK60 | 6SK70 | 6SK100 | |
| Series Number | | | | | | | |
| Maximum DC Blocking Voltage | V _{RM} | 40 | 50 | 60 | 70 | 100 | VOLTS |
| Maximum RMS Voltage | V _{RMS} | | | | | | |
| Maximum Peak Recurrent Reverse Voltage | V _{RRM} | | | | | | |
| Average Forward Rectified Current @ T _c = 100 °C | I _o | 6 | | | | | AMPS |
| Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load) | I _{FSM} | 120 | | | | | |
| Maximum Forward Voltage at 6 Amps DC | V _{FM} | 0.55 | | 0.65 | | 0.85 | VOLTS |
| Maximum Average DC Reverse Current At Rated DC Blocking Voltage | I _{RM} | @ T _J = 25 °C 0.5 | | | @ T _J = 100 °C 0.1 | | mA |
| Typical Thermal Resistance, Junction to Case (on heat sink) | R _{θJC} | 3 | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | | | | | °C |



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RATING & CHARACTERISTIC CURVES FOR SERIES 6SK40 - 6SK100

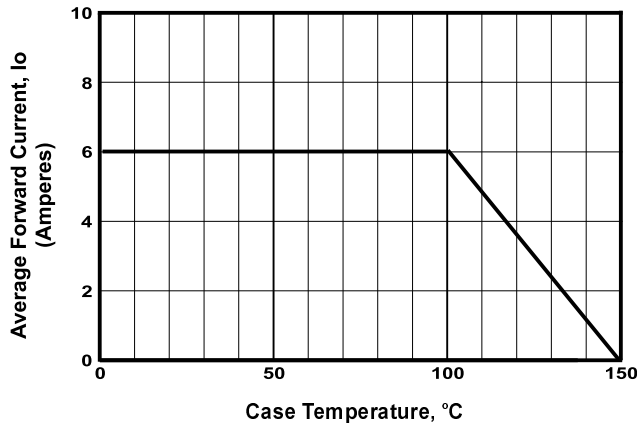


FIGURE 1. FORWARD CURRENT DERATING CURVE

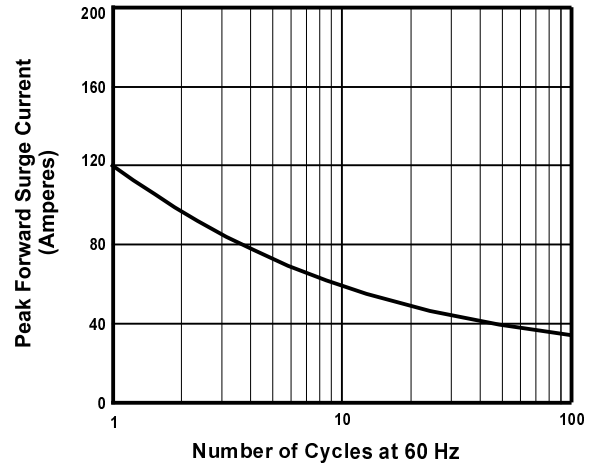


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

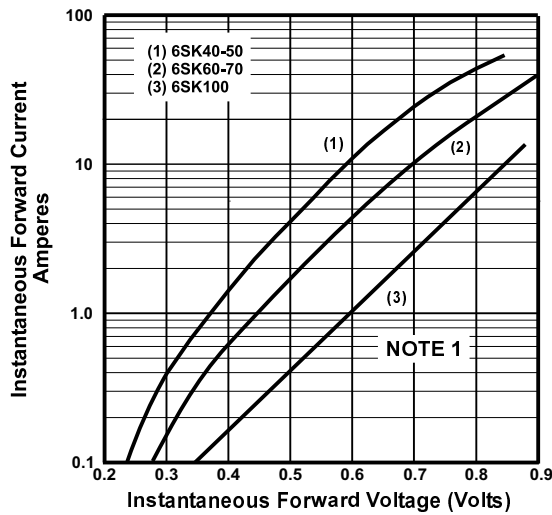


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

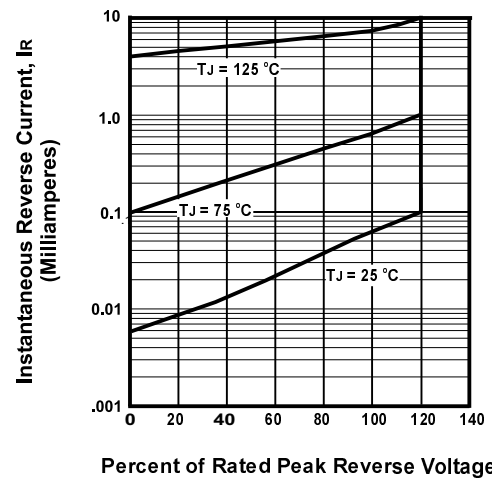


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

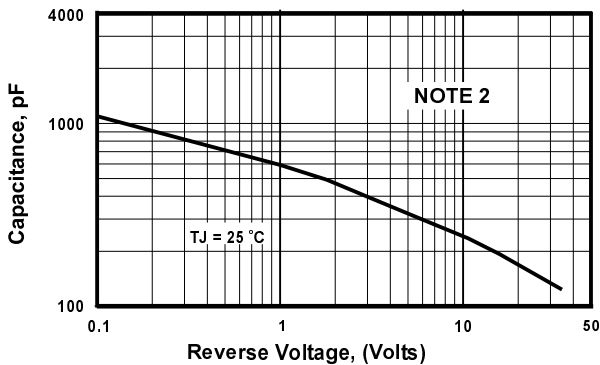


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

- (1) $T_J = 25^\circ\text{C}$, Pulse Width = 300 μSec , 2.0% Duty Cycle
- (2) $T_J = 25^\circ\text{C}$, $f = 1\text{ MHz}$, $V_{SIG} = 50\text{ mV P-P}$