

## Surface Mount Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a refractory metal capable of high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical applications are in switching mode power supplies such as adaptors, DC/DC converters free-wheeling and polarity protection diodes.

- \* Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Guarantee Reverse Avalanche.
- \* Guard-Ring for Stress Protection.
- \* Low Power Loss & High efficiency.
- \* High Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- \* Pb free
- \* In compliance with EU RoHs directives

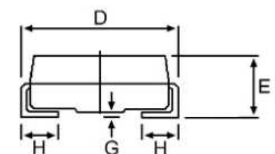
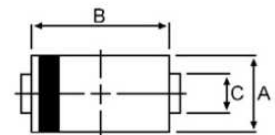


### SCHOTTKY BARRIER RECTIFIERS

**3.0 AMPERES  
60 VOLTS**



**DO-214AC(SMA)**



| DIM | MILLIMETERS |      |
|-----|-------------|------|
|     | MIN         | MAX  |
| A   | 2.20        | 2.80 |
| B   | 3.90        | 4.50 |
| C   | 1.30        | 1.70 |
| D   | 4.70        | 5.30 |
| E   | 1.90        | 2.50 |
| G   | --          | 0.22 |
| H   | 0.75        | 1.55 |

### MAXIMUM RATINGS

| Characteristic  | Symbol                          | SK36        | Unit |
|---|---------------------------------|-------------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                  | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 60          | V    |
| RMS Reverse Voltage   | $V_{R(RMS)}$                    | 42          | V    |
| Average Rectifier Forward Current   | $I_O$                           | 3.0         | A    |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz) | $I_{FSM}$                       | 70          | A    |
| Operating and Storage Junction Temperature Range  | $T_J, T_{STG}$                  | -65 to +150 | °C   |

### ELECTRICAL CHARACTERISTICS

| Characteristic   | Symbol          | Min. | Typ.         | Max.        | Unit |
|--|-----------------|------|--------------|-------------|------|
| Maximum Instantaneous Forward Voltage<br>( $I_F = 3.0$ Amp, $T_C = 25^\circ\text{C}$ )<br>( $I_F = 3.0$ Amp, $T_C = 125^\circ\text{C}$ ) | $V_F$           | ---  | 0.65<br>0.55 | 0.70<br>--- | V    |
| Maximum Instantaneous Reverse Current<br>(Rated DC Voltage, $T_C = 25^\circ\text{C}$ )<br>(Rated DC Voltage, $T_C = 125^\circ\text{C}$ ) | $I_R$           | ---  | 0.001<br>786 | 500<br>---  | uA   |
| Maximum Thermal Resistance Junction to case  | $R_{\theta JC}$ |      | 60           |             | °C/W |
| Typical Junction Capacitance<br>(Reverse Voltage of 4 volts & $f = 1$ MHz)   | $C_P$           |      | 160          |             | pF   |

CASE---  
Transfer molded plastic

POLARITY---  
Cathode indicated polarity band

FIG-1 FORWARD CURRENT DERATING CURVE

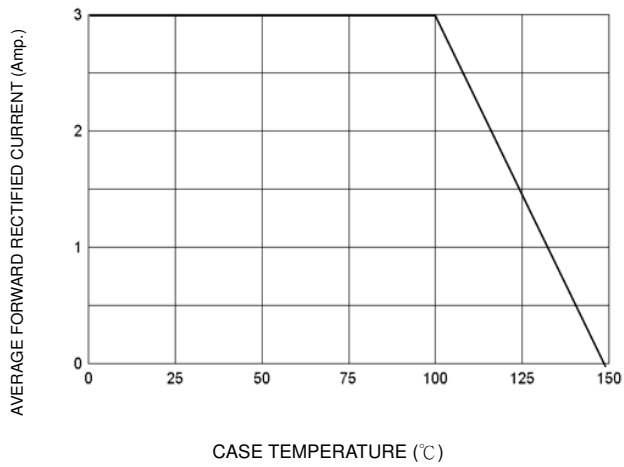


FIG-2 TYPICAL FORWARD CHARACTERISTICS

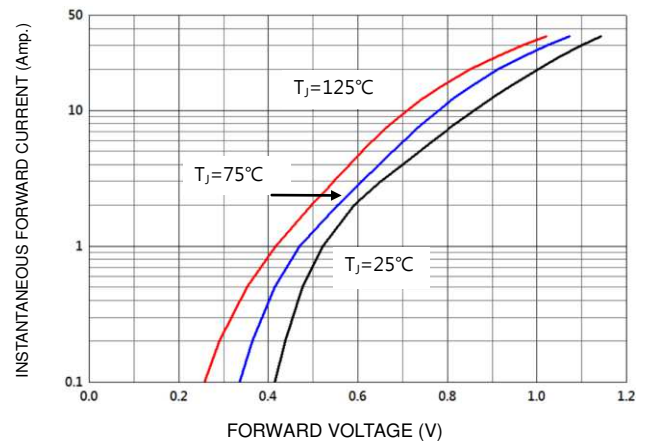


FIG-3 TYPICAL REVERSE CHARACTERISTICS

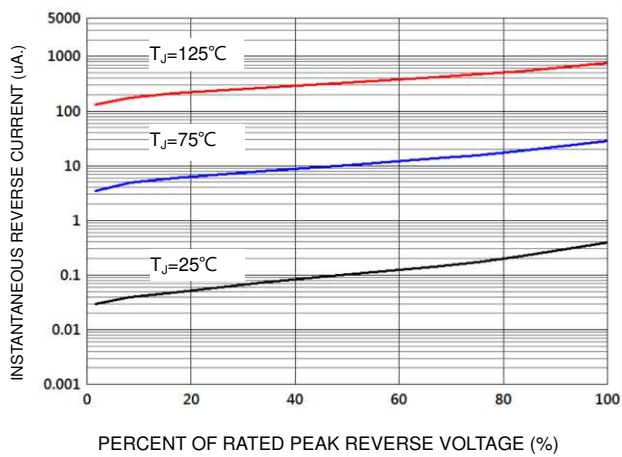


FIG-4 TYPICAL JUNCTION CAPACITANCE

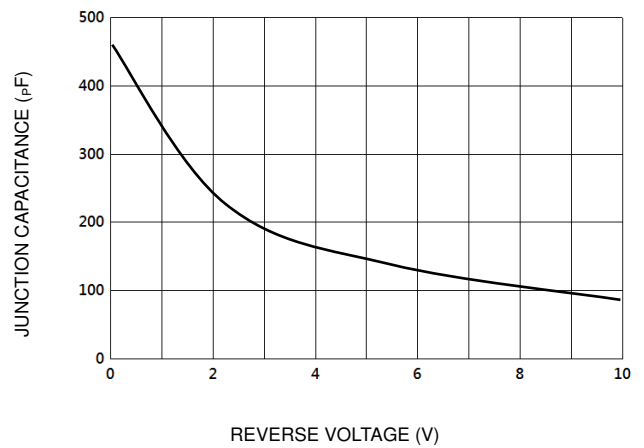
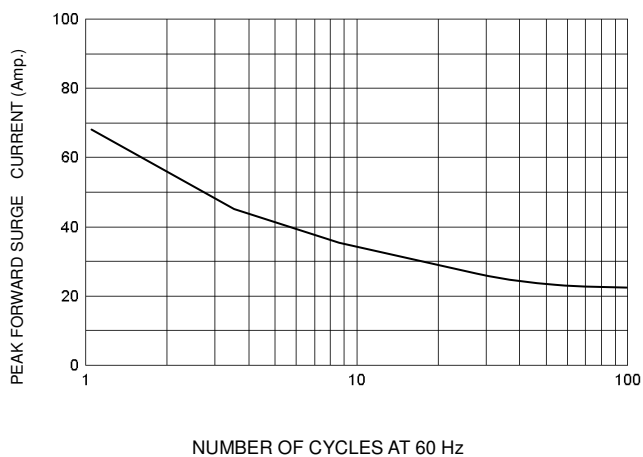


FIG-5 PEAK FORWARD SURGE CURRENT



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