

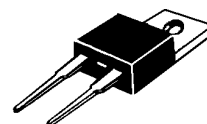
### Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as 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.
- \* 150 Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

### SCHOTTKY BARRIER RECTIFIERS

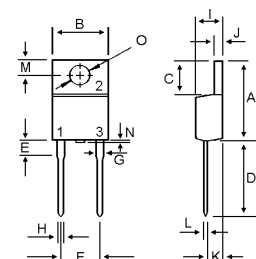
**8 AMPERES  
30-60 VOLTS**



**TO-220A**

### MAXIMUM RATINGS

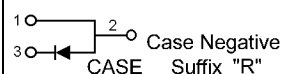
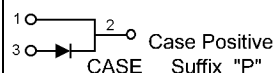
| Characteristic                                                                                               | Symbol                          | S08A        |    |    |    |    |    | Unit |
|--------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|----|----|----|----|----|------|
|                                                                                                              |                                 | 30          | 35 | 40 | 45 | 50 | 60 |      |
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                       | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 30          | 35 | 40 | 45 | 50 | 60 | V    |
| RMS Reverse Voltage                                                                                          | $V_{R(RMS)}$                    | 21          | 25 | 28 | 32 | 35 | 42 | V    |
| Average Rectifier Forward Current                                                                            | $I_{F(AV)}$                     | 8           |    |    |    |    |    | A    |
| Peak Repetitive Forward Current<br>(Rate $V_R$ , Square Wave, 20kHz)                                         | $I_{FM}$                        | 16          |    |    |    |    |    | A    |
| Non-Repetitive Peak Surge Current<br>(Surge applied at rate load conditions<br>halfwave, single phase, 60Hz) | $I_{FSM}$                       | 150         |    |    |    |    |    | A    |
| Operating and Storage Junction<br>Temperature Range                                                          | $T_J, T_{stg}$                  | -65 to +150 |    |    |    |    |    |      |



| DIM | MILLIMETERS |       |
|-----|-------------|-------|
|     | MIN         | MAX   |
| A   | 14.68       | 15.32 |
| B   | 9.78        | 10.42 |
| C   | 6.02        | 6.52  |
| D   | 13.06       | 14.62 |
| E   | 3.57        | 4.07  |
| F   | 4.84        | 5.32  |
| G   | 1.12        | 1.36  |
| H   | 0.72        | 0.96  |
| I   | 4.22        | 4.98  |
| J   | 1.14        | 1.38  |
| K   | 2.20        | 2.98  |
| L   | 0.33        | 0.55  |
| M   | 2.48        | 2.98  |
| N   | ----        | 1.00  |
| O   | 3.70        | 3.90  |

### ELECTRIAL CHARACTERISTICS

| Characteristic                                                                                                                               | Symbol         | S08A         |    |    |    |              |    | Unit |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|----|----|----|--------------|----|------|
|                                                                                                                                              |                | 30           | 35 | 40 | 45 | 50           | 60 |      |
| Maximum Instantaneous Forward Voltage<br>( I <sub>F</sub> =8.0 Amp T <sub>C</sub> = 25 )<br>( I <sub>F</sub> =8.0 Amp T <sub>C</sub> = 125 ) | V <sub>F</sub> | 0.55<br>0.48 |    |    |    | 0.65<br>0.57 |    | V    |
| Maximum Instantaneous Reverse Current<br>( Rated DC Voltage, T <sub>C</sub> = 25 )<br>( Rated DC Voltage, T <sub>C</sub> = 125 )             | I <sub>R</sub> | 0.5<br>20    |    |    |    |              |    | mA   |



# S08A30 thru S08A60

FIG-1 FORWARD CURRENT DERATING CURVE

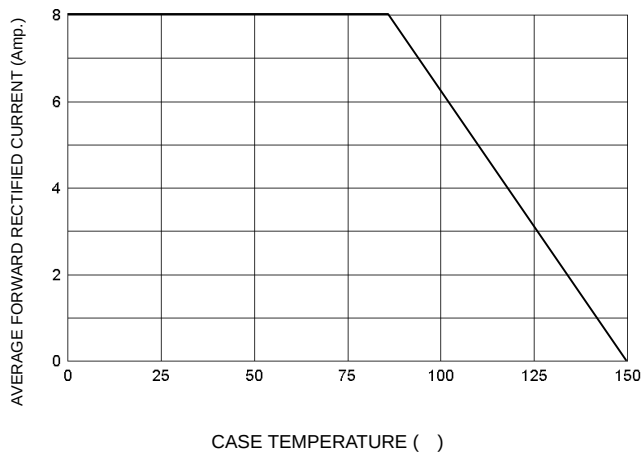


FIG-2 TYPICAL FORWARD CHARACTERISTICS

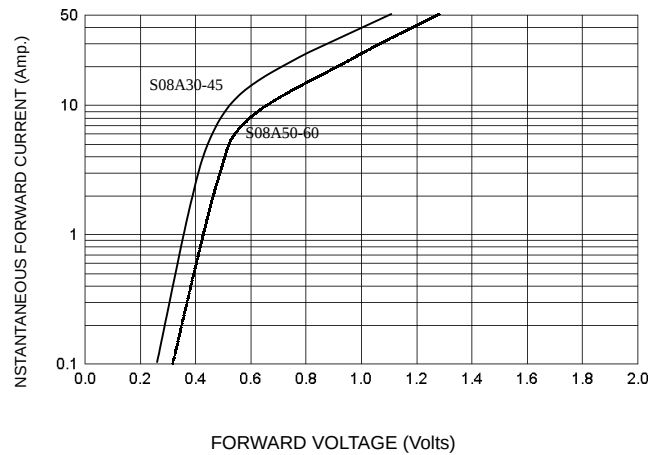


FIG-3 TYPICAL REVERSE CHARACTERISTICS

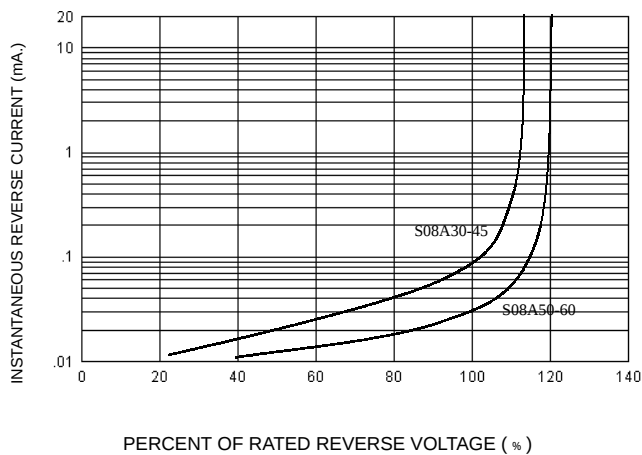


FIG-4 TYPICAL JUNCTION CAPACITANCE

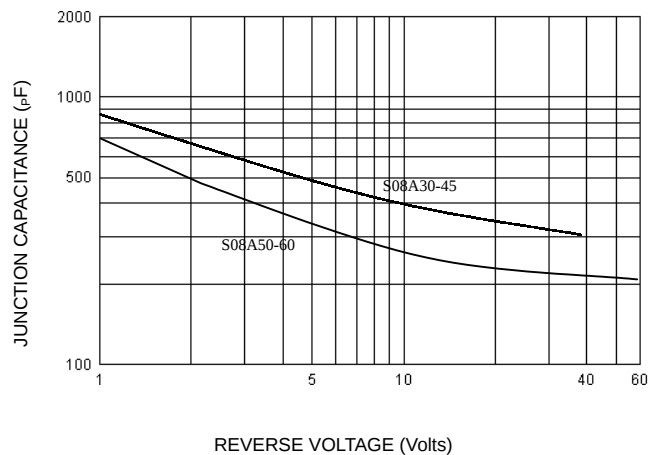


FIG-5 PEAK FORWARD SURGE CURRENT

