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| <b>FAST RECOVERY RECTIFIERS</b>   | <b>REVERSE VOLTAGE - 50 to 1000 Volts</b><br><b>FORWARD CURRENT - 1.0 Ampere</b> |
| <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>● Fast switching for high efficiency</li> <li>● Low cost</li> <li>● Diffused junction</li> <li>● Low reverse leakage current</li> <li>● Low forward voltage drop</li> <li>● High current capability</li> <li>● The plastic material carries UL recognition 94V-0</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>● Case: JEDEC A-405 molded plastic</li> <li>● Polarity: Color band denotes cathode</li> <li>● Weight: 0.008 ounces , 0.22 grams</li> <li>● Mounting position: Any</li> </ul> | <p><b>A-405</b></p> <p>Dimensions in inches and (millimeters)</p>                |

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

| CHARACTERISTICS   | SYMBOL            | FR101S      | FR102S | FR103S | FR104S | FR105S | FR106S | FR107S | UNIT |
|---|-------------------|-------------|--------|--------|--------|--------|--------|--------|------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>  | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V    |
| Maximum RMS Voltage   | V <sub>RMS</sub>  | 35          | 70     | 140    | 280    | 420    | 560    | 700    | V    |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>   | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V    |
| Maximum Average Forward Rectified Current<br>@T <sub>A</sub> =75 °C   | I <sub>(AV)</sub> | 1.0         |        |        |        |        |        |        | A    |
| Peak Forward Surge Current<br>8.3ms Single Half Sine-Wave<br>Super Imposed on Rated Load(JEDEC Method)        | I <sub>FSM</sub>  | 30          |        |        |        |        |        |        | A    |
| Peak Forward Voltage at 1.0A DC   | V <sub>F</sub>    | 1.3         |        |        |        |        |        |        | V    |
| Maximum DC Reverse Current<br>@T <sub>J</sub> =25°C<br>at Rated DC Blocking Voltage<br>@T <sub>J</sub> =100°C | I <sub>R</sub>    | 5.0<br>100  |        |        |        |        |        |        | μA   |
| Maximum Reverse Recovery Time (Note 1)  | T <sub>rr</sub>   | 150         |        |        | 250    |        | 500    |        | nS   |
| Typical Junction Capacitance (Note2)  | C <sub>J</sub>    | 25          |        |        | 15     |        |        |        | pF   |
| Typical Thermal Resistance (Note3)  | R <sub>θJA</sub>  | 25          |        |        |        |        |        |        | °C/W |
| Operating Temperature Range   | T <sub>J</sub>    | -55 to +150 |        |        |        |        |        |        | °C   |
| Storage Temperature Range   | T <sub>STG</sub>  | -55 to +150 |        |        |        |        |        |        | °C   |

NOTES: 1. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC  
 3. Thermal resistance junction to ambient.

FIG. 1 – FORWARD CURRENT DERATING CURVE

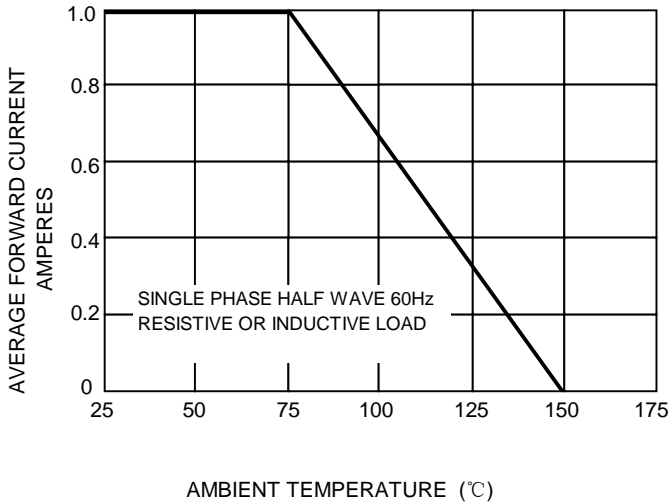


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

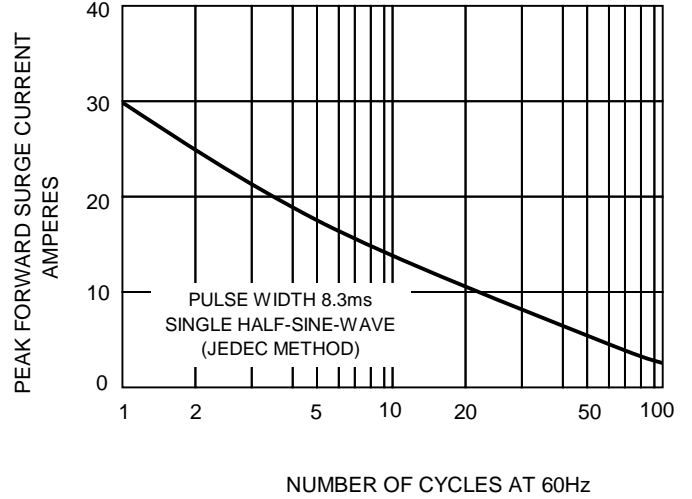


FIG.3 – TYPICAL JUNCTION CAPACITANCE

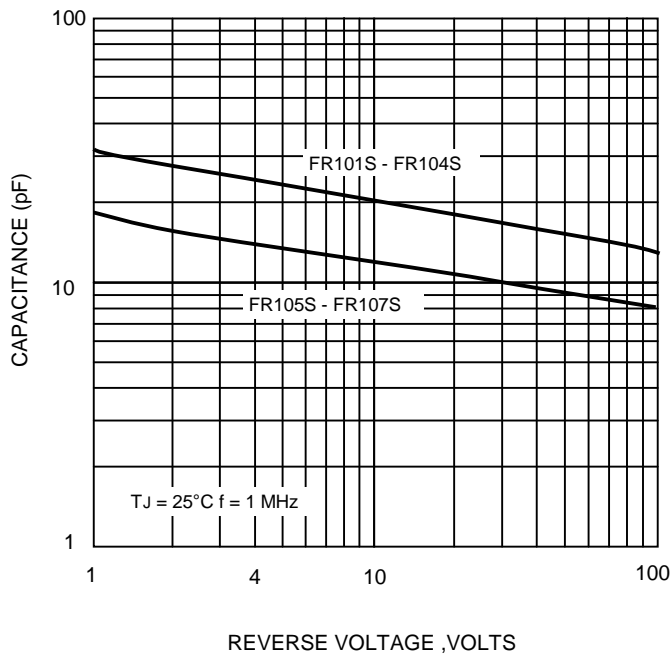


FIG.4-TYPICAL FORWARD CHARACTERISTICS

