

Pb Free Plating Product

FML21S/FML22S/FML23S/FML24S/FML25S/FML26S



10 Amperes Insulated Dual Common Cathode Ultra Fast Recovery Half Bridge Rectifiers

**Features**

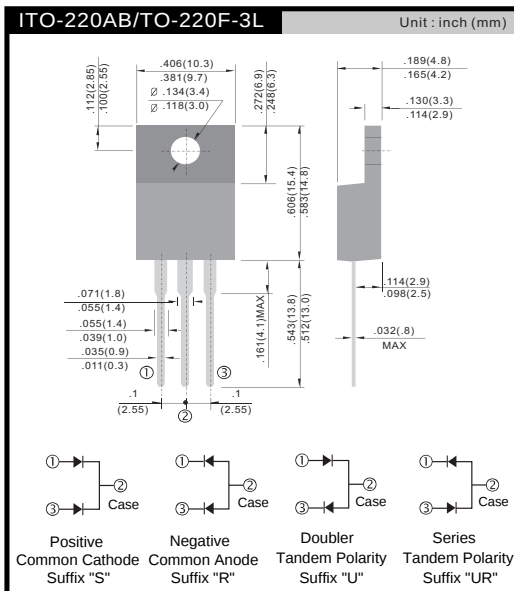
- ★ Fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

**Application**

- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

**Mechanical Data**

- ★ Case: ITO-220AB full plastic isolated package
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: As marked on diode body
- ★ Mounting position: Any
- ★ Weight: 1.75 gram approximately

**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%.

|                                                                                                      | SYMBOL                            | FML21S<br>FML22S | FML23S<br>FML24S | FML25S<br>FML26S | UNIT     |
|------------------------------------------------------------------------------------------------------|-----------------------------------|------------------|------------------|------------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                               | V <sub>RRM</sub>                  | 200              | 400              | 600              | V        |
| Maximum RMS Voltage                                                                                  | V <sub>RMS</sub>                  | 140              | 280              | 420              | V        |
| Maximum DC Blocking Voltage                                                                          | V <sub>DC</sub>                   | 200              | 400              | 600              | V        |
| Maximum Average Forward Rectified Current T <sub>C</sub> =100°C (Total Device 2*5A=10A)              | I <sub>F(AV)</sub>                | 10.0             |                  |                  | A        |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)    | I <sub>FSM</sub>                  | 100              |                  |                  | A        |
| Maximum Instantaneous Forward Voltage @ 5.0 A (Both Diode/Per Diode/Per Leg)                         | V <sub>F</sub>                    | 0.98             | 1.3              | 1.7              | V        |
| Maximum DC Reverse Current @T <sub>J</sub> =25°C At Rated DC Blocking Voltage @T <sub>J</sub> =125°C | I <sub>R</sub>                    | 5.0<br>100       |                  |                  | μA<br>μA |
| Maximum Reverse Recovery Time (Note 1)                                                               | T <sub>rr</sub>                   | 35               |                  |                  | nS       |
| Typical junction Capacitance (Note 2)                                                                | C <sub>J</sub>                    | 65               |                  |                  | pF       |
| Typical Thermal Resistance (Note 3)                                                                  | R <sub>θJC</sub>                  | 3.0              |                  |                  | °C/W     |
| Operating Junction and Storage Temperature Range                                                     | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150      |                  |                  | °C       |

NOTES : (1) Reverse recovery test conditions I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.  
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.  
 (3) Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

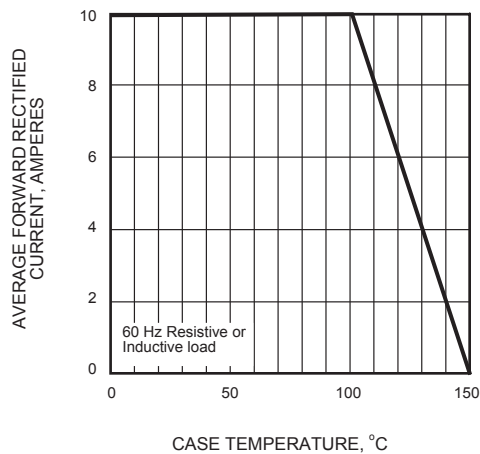


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

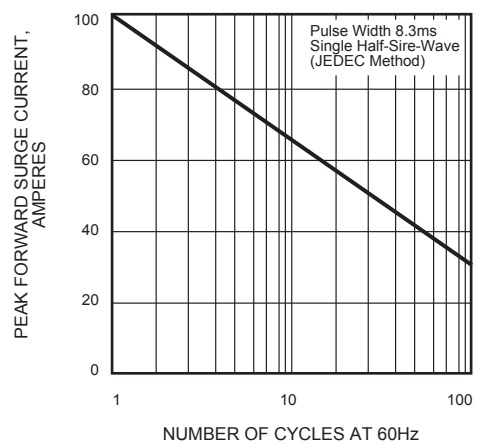


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

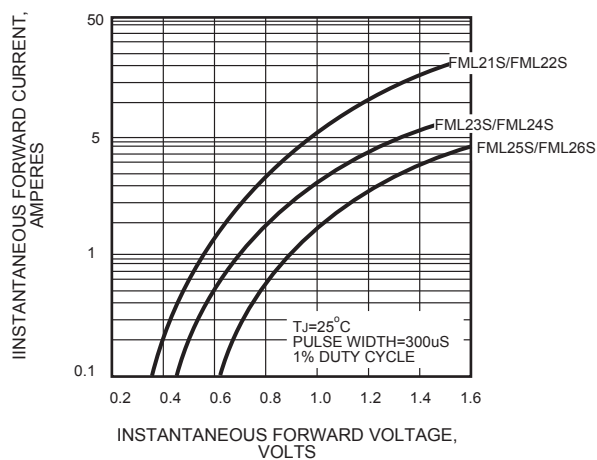


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

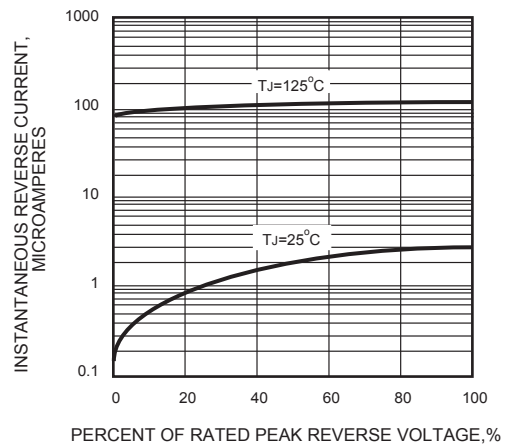


FIG.5 - TYPICAL JUNCTION CAPACITANCE

