

Pb Free Plating Product

FMG61R thru FMG612R



60.0 Ampere Heatsink Dual Common Anode Ultra Fast Recovery Rectifiers

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| <p>Features</p> <ul style="list-style-type: none"> ※ ThinkSemi latest&matured process FRD/FRED ※ Low forward voltage drop ※ High current capability ※ Low reverse leakage current ※ High surge current capability <p>Application</p> <ul style="list-style-type: none"> ※ Automotive Inverters and Solar Inverters ※ Car Audio Amplifiers and Sound Device Systems ※ Plating Power Supply, Motor Control, UPS and SMPS etc. <p>Mechanical Data</p> <ul style="list-style-type: none"> ※ Case: Heatsink open metal TO-3P(TO-3PN/TO-3PB) 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: 6.5 gram approximately | <p>TO-3P(TO-3PN/TO-3PB) Unit:inch(mm)</p> <p>① Case ② Case ③ Case</p> <p>Positive Common Cathode Suffix "S"</p> <p>Negative Common Anode Suffix "R"</p> <p>Doubler Doubler Polarity Suffix "U"</p> <p>Tandem Series Connection Suffix "T"</p> |
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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%.

| PARAMETER | SYMBOL | FMG61R FMG62R | FMG63R FMG64R | FMG65R FMG66R | FMG67R FMG68R | FMG69R FMG610R | FMG610R FMG612R | UNIT |
|--|--------------|------------------|------------------|------------------|------------------|-------------------|--------------------|----------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 200 | 400 | 600 | 800 | 1000 | 1200 | V |
| Maximum RMS Voltage | VRMS | 140 | 280 | 420 | 560 | 700 | 840 | V |
| Maximum DC Blocking Voltage | VDC | 200 | 400 | 600 | 800 | 1000 | 1200 | V |
| Maximum Average Forward Rectified Current TC=125°C (Total Device 2x30.0A=60.0A) | IF(AV) | 60.0 | | | | | | A |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)(Per Diode/Per Leg) | IFSM | 600 | | | | | | A |
| Maximum Instantaneous Forward Voltage @30.0A(Per Diode/Per Leg) | VF (Typical) | 0.85-0.95 | 1.00-1.25 | 1.25-1.50 | 1.50-1.70 | | | V |
| Maximum DC Reverse Current @TJ=25°C At Rated DC Blocking Voltage @TJ=125°C | IR | 1.0 100 | | | | | | µA µA |
| Maximum Reverse Recovery Time (Note1) | Trr | 25-50 | | | 50-75 | | | nS |
| Typical Junction Capacitance (Note 2) | CJ | 300 | | | | | | pF |
| Typical Thermal Resistance (Note 3) | RθJC | 0.75 | | | | | | °C/W |
| Operating Junction and Storage Temperature Range | TJ,TSTG | -55 to +175 | | | | | | °C |

Note:(1)Reverse recovery test conditions IF = 0.5A, IR = 1.0A, Irr = 0.25A.
 Note:(2)Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.
 Note:(3)Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

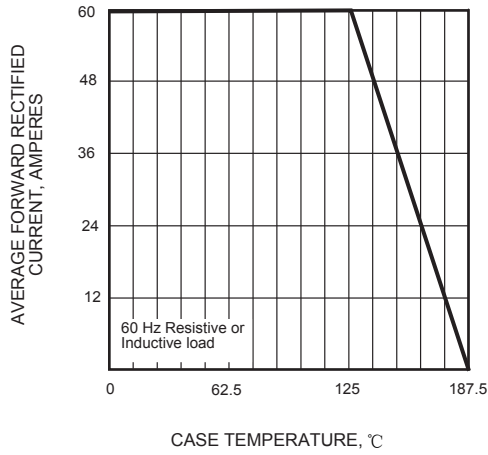


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

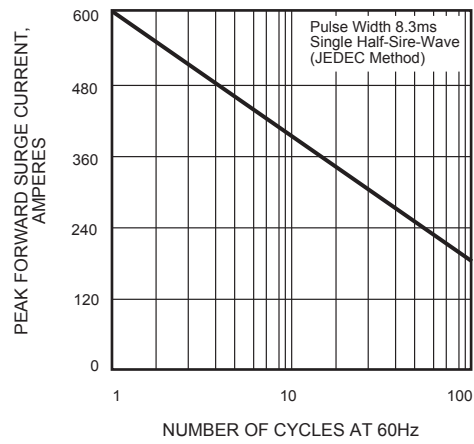


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

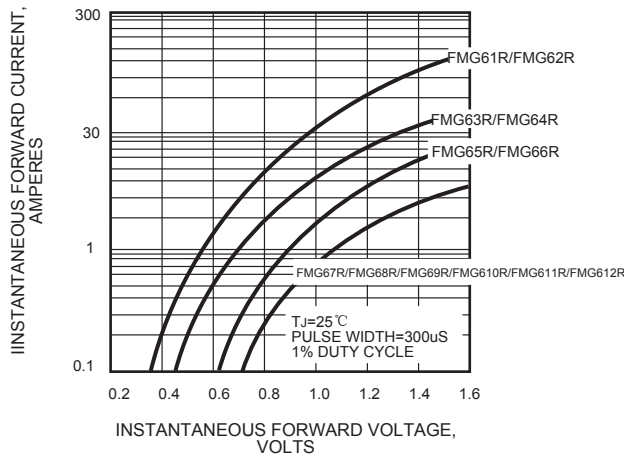


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

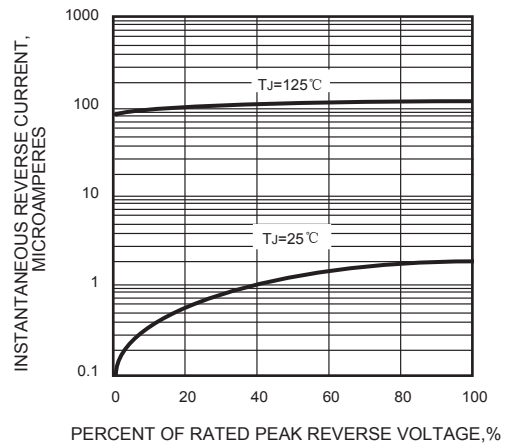


FIG.5 - TYPICAL JUNCTION CAPACITANCE

