Pb Free Plating Product

## UF16C20C/UF16C40C/UF16C60C

16.0 Ampere Heatsink Dual Common Cathode Ultra Fast Recovery Rectifiers

**Features**

※ ThinkiSemi latest&matured process FRD/FRED
※ Fast switching for high efficiency
※ Low forward voltage drop
※ High current capability
※ Low reverse leakage current
※ High surge current capability

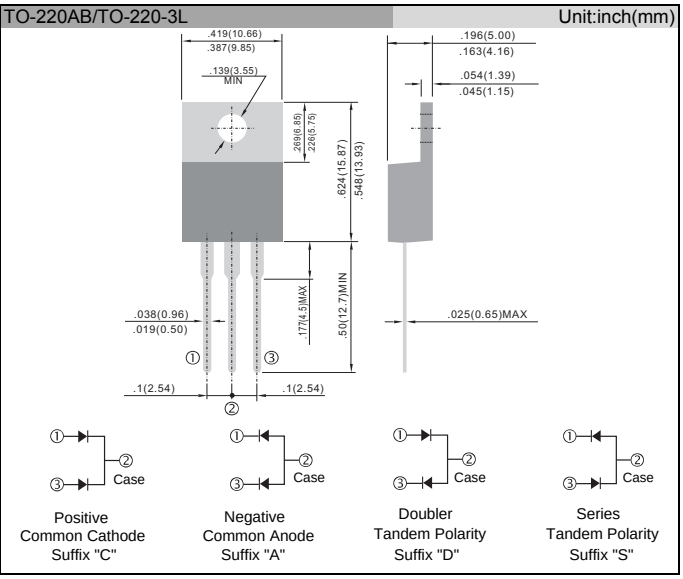
**Application**

※ Automotive Inverters and Solar Inverters
※ Car Audio Amplifiers and Sound Device Systems
※ Plating Power Supply,Motor Control,UPS and SMPS etc.

**Mechanical Data**

※ Case: Open Metal Package TO-220AB/TO-220-3L
※ 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: 2.2 gram approximately

TO-220AB/TO-220-3L Unit:inch(mm)




**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

| PARAMETER | SYMBOL | UF16C10C UF16C20C | UF16C30C UF16C40C | UF16C50C UF16C60C | UNIT |
|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 200 | 400 | 600 | V |
| Maximum RMS Voltage | VRMS | 140 | 280 | 420 | V |
| Maximum DC Blocking Voltage | VDC | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified Current Tc=100°C (Total Device 2x8.0A=16.0A) | IF(AV) | 16.0 | | | A |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)(Per Diode/Per Leg) | IFSM | 160 | | | A |
| Maximum Instantaneous Forward Voltage @8.0A (Per Diode/Per Leg) | VF | 0.85-0.95 | 1.00-1.25 | 1.25-1.50 | V |
| Maximum DC Reverse Current @TJ=25°C<br>At Rated DC Blocking Voltage @TJ=125°C | IR | 1.0<br>5.0 | | | μA<br>μA |
| Maximum Reverse Recovery Time (Note1) | Trr | 25-35 | | | nS |
| Typical Junction Capacitance (Note 2) | CJ | 80 | | | pF |
| Typical Thermal Resistance (Note 3) | RθJC | 1.5 | | | °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.



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FIG.1 - FORWARD CURRENT DERATING CURVE

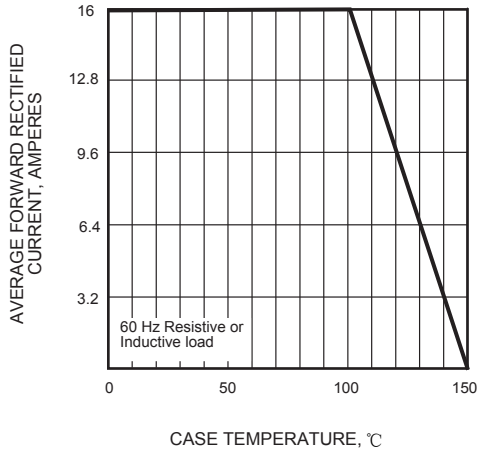



FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

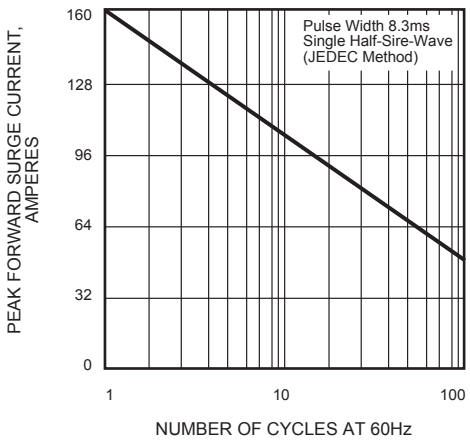



FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

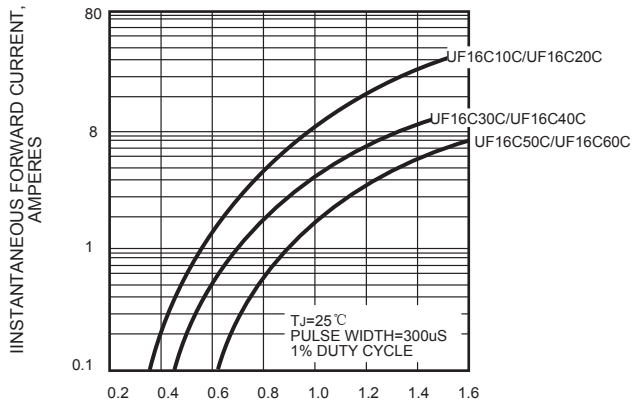



FIG.4 - TYPICAL REVERSE CHARACTERISTICS

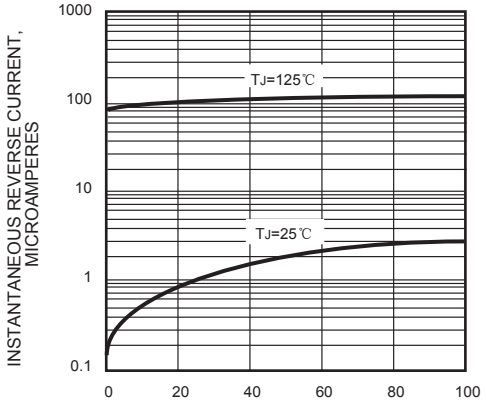
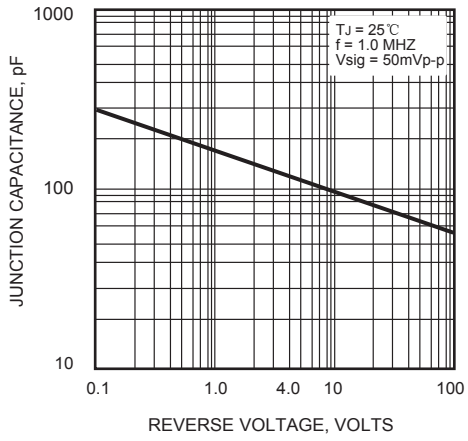



FIG.5 - TYPICAL JUNCTION CAPACITANCE






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