

Pb Free Plating Product

HER1002CL thru HER1012CL



10.0 Ampere Heatsink Dual Series Connection High Efficiency Rectifiers

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| <p>Features</p> <ul style="list-style-type: none"> ThinkiSemi 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-220AB/TO-220-3L 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: 2.0 gram approximately | <p>TO-220AB/TO-220-3L Unit: inch(mm)</p> <p>① ② ③ Case</p> <p>Positive Common Cathode Suffix "CT"</p> <p>① ② ③ Case</p> <p>Negative Common Anode Suffix "CA"</p> <p>① ② ③ Case</p> <p>Doubler Tandem Polarity Suffix "CR"</p> <p>① ② ③ Case</p> <p>Series Tandem Polarity Suffix "CL"</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 | HER1002CL | HER1003CL HER1004CL | HER1006CL | HER1008CL | HER1010CL | HER1012CL | 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 2x5.0A=10.0A) | IF(AV) | 10.0 | | | | | | A |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)(Per Diode/Per Leg) | IFSM | 125 | | | | | | A |
| Maximum Instantaneous Forward Voltage @5.0A(Per Diode/Per Leg) | VF (Typical) | 0.85-1.00 | 1.00-1.30 | 1.30-1.70 | 1.30-1.70 | | | 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 | 35-50 | | | 50-75 | | | nS |
| Typical Junction Capacitance (Note 2) | CJ | 50 | | | | | | 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.

FIG.1 - FORWARD CURRENT DERATING CURVE

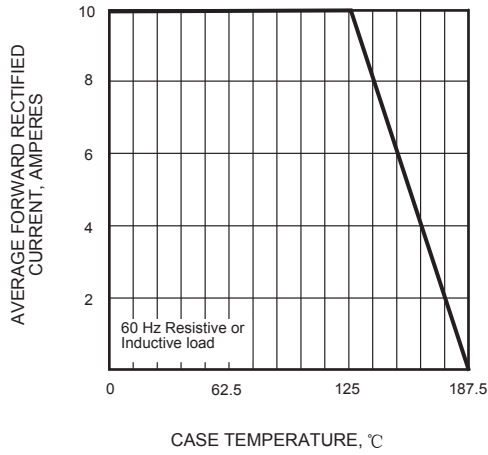


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

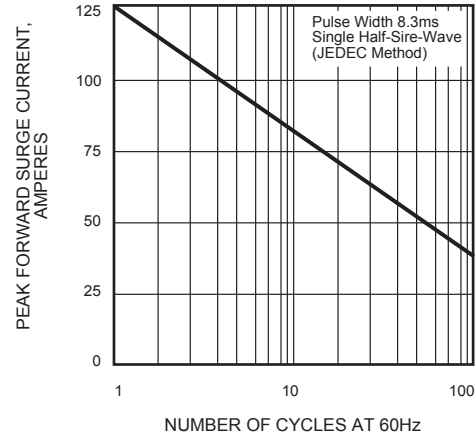


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

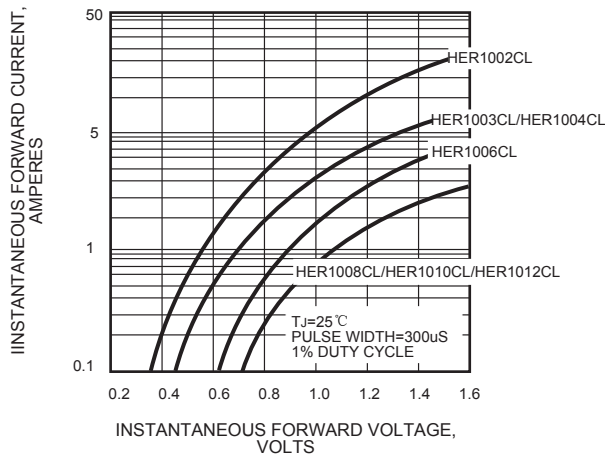


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

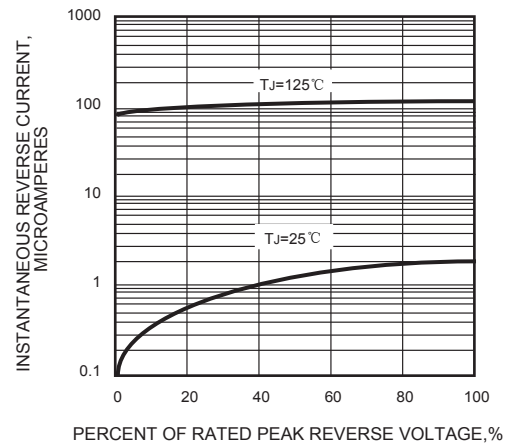


FIG.5 - TYPICAL JUNCTION CAPACITANCE

