

50 AMP HIGH FREQUENCY TAB MOUNTED SOFT RECOVERY DIODES

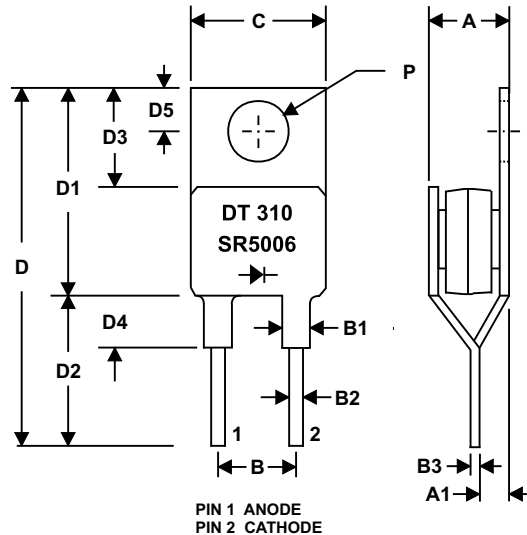
FEATURES

- TRUE SOFT RECOVERY CHARACTERISTIC WITH NO RINGING, SPIKES, or OVERSHOOT
- HIGH FREQUENCY: 250 kHz
FAST RECOVERY: 100nS - 150nS
- UNMATCHED PERFORMANCE - Minimal RFI/EMI, Reduced Power Losses, Extremely Cool Operation Increased Power Supply Efficiency
- VOID FREE Vacuum Die Soldering For Maximum Mechanical Strength And Heat Dissipation (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Proprietary *SOFT GLASS* Junction Passivation For Superior Reliability and Performance
- Wide Range of Applications - DC Motor Controllers Inverters, Converters, Choppers, Power Supplies, etc.

MECHANICAL DATA

- Structure: Epoxy encapsulated diode body with silver-plated copper tabs
- Finish: All external surfaces are silver plated for corrosion resistance and superior solderability
- Soldering Temperature: 250 °C maximum, 3/8" from case for 10 seconds
- Mounting: Lead or chassis mounted, same configuration as TO-220AB
- Mounting Torque: 8 in-lbs Max.
- Weight: 1.2 Ounces (3.6 Grams), approximately

MECHANICAL SPECIFICATION



PIN 1 ANODE
PIN 2 CATHODE

DIE SIZE: 0.180" x 0.180" SQUARE

RoHS COMPLIANT

| Sym | Min | Max |
|-----|-------|-------|
| A | 0.284 | 0.310 |
| A1 | 0.080 | 0.115 |
| B | 0.170 | 0.210 |
| B1 | 0.060 | 0.090 |
| B2 | 0.025 | 0.045 |
| B3 | 0.023 | 0.029 |
| C | 0.380 | 0.420 |
| D | | 1.187 |
| D1 | 0.560 | 0.625 |
| D2 | | 0.562 |
| D3 | 0.230 | 0.270 |
| D4 | | 0.200 |
| D5 | 0.100 | 0.120 |
| P | 0.139 | 0.147 |

ALL DIMENSIONS IN INCHES

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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

| PARAMETER (TEST CONDITIONS) | SYMBOL | RATINGS | | | | | UNITS |
|---|-----------------------------------|---------------------------|---------|---------|---------|---------|-------|
| | | SR 5000 | SR 5001 | SR 5002 | SR 5004 | SR 5006 | |
| Series Number | | | | | | | |
| Maximum DC Blocking Voltage | V _{RM} | 50 | 100 | 200 | 400 | 600 | VOLTS |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | |
| Maximum Peak Recurrent Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | |
| Average Forward Rectified Current | I _O | 50 | | | | | AMPS |
| Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load) | I _{FSM} | 720 | | | | | |
| Maximum Forward Voltage at 35 Amps DC | V _{FM} | 1.2 (Typical 1.1) | | | | | VOLTS |
| Maximum Average DC Reverse Current At Rated DC Blocking Voltage | I _{RM} | @ T _c = 25 °C | | | | | uA |
| | | @ T _c = 125 °C | | | | | |
| Typical Thermal Resistance, Junction to Case | R _{θJC} | 0.8 | | | | | °C/W |
| Maximum Reverse Recovery Time - Soft Recovery | T _{RR} | 150 (Typ. 100) | | | | | nSec |
| Junction Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | | | | | °C |

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