DIOTEC ELECTRONICS CORP.
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50 AMP HIGH FREQUENCY SOFT RECOVERY BRIDGE RECTIFIERS

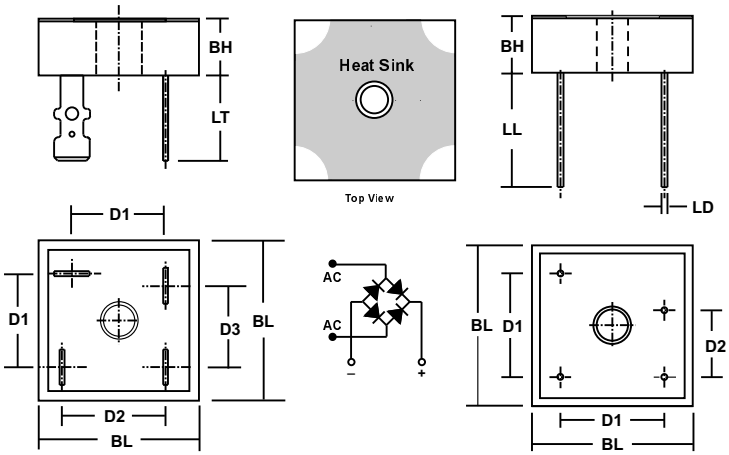
FEATURES

- 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 - Inverters, Converters Choppers, Power Supplies, etc.
- **UL RECOGNIZED - FILE #E141956**
- **RoHS COMPLIANT**

MECHANICAL DATA

- Case: Case: Molded epoxy with integral heat sink
  Epoxy carries a U/L Flammability rating of 94V-0
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 0.7 Ounces (20.0 Grams)
  Wire Leads - 0.55 Ounces (16.0 Grams)

MECHANICAL SPECIFICATION



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	15.2	n/a	0.6

Use Suffix "T" For FAST-ON TERMINALS

EXAMPLE P/N: DB5006P/T-S

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Use Suffix "W" For WIRE LEADS

EXAMPLE P/N: DB5006P/W-S

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		DB 5000P-S	DB 5001P-S	DB 5002P-S	DB 5004P-S	DB 5006P-S	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	VOLTS
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	VOLTS
Average Forward Rectified Current @ T_C = 55 °C	I_O	50					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	600					AMPS
Maximum Forward Voltage, Per Diode, at 25 Amps DC	V_{FM}	1.2					VOLTS
Maximum Average DC Reverse Current at Rated DC Blocking Voltage Per Diode @ T_A = 25 °C @ T_A = 125 °C	I_{RM}	1.0 50					µA
Maximum Reverse Recovery Time	T_{RR}	150 (Typ. 100)					nS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.1					°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150					°C

NOTES: (1) Bolt bridge on heat sink with #8 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.

3.01 50dbp-s