

**DIOTEC ELECTRONICS CORP**  
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## 35 AMP LEAD MOUNT FAST RECOVERY BUTTON DIODES

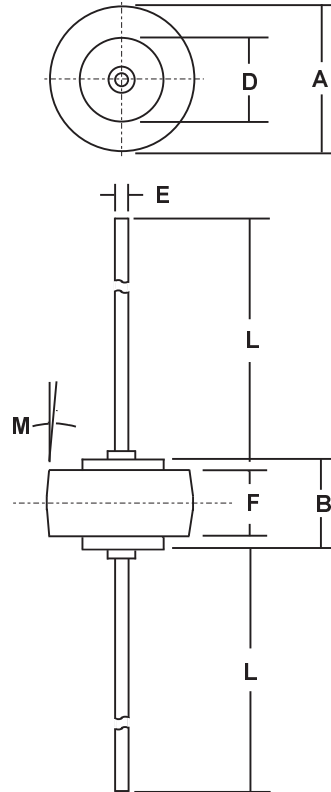
### FEATURES

- **VOID FREE Vacuum Die Soldering For Maximum Mechanical Strength And Heat Dissipation** (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- **HIGH FREQUENCY: 250 kHz**  
**FAST RECOVERY: Typical 100nS - 150nS**
- **UNMATCHED PERFORMANCE - Minimal RFI/EMI, Reduced Power Losses, Extremely Cool Operation**  
**Increased Power Supply Efficiency**
- **Proprietary Junction Passivation For Superior Reliability and Performance**
- **Wide Range of Applications - Inverters, Converters Choppers, Power Supplies, etc.**

### MECHANICAL DATA

- **Case: Molded Epoxy (UL Flammability Rating 94V-O)**
- **Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable**
- **Maximum Lead Soldering Temperature: 210 °C, 3/8" case for 10 seconds at 5 lbs tension**
- **Mounting Position: Any**
- **Polarity: Color band or diode symbol on case**
- **Weight: 0.09 Ounces (2.5 Grams)**

### MECHANICAL SPECIFICATION



**Die Size:**  
**0.180" x 0.180"**  
**Square**

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.43	8.69	0.332	0.342
B	5.94	6.25	0.234	0.246
D	5.46	5.71	0.215	0.225
E	1.27	1.35	0.050	0.053
F	4.19	4.45	0.165	0.175
L	25.15	25.65	0.990	1.010
M	5° NOM		5° NOM	

**RoHS COMPLIANT**

### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
		MR 820	MR 821	MR 822	MR 824	MR 826	
Series Number							
Maximum DC Blocking Voltage	V <sub>RM</sub>	50	100	200	400	600	VOLTS
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	
Maximum Peak Recurrent Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	
Average Forward Rectified Current	I <sub>O</sub>	35					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I <sub>FSM</sub>	600					
Maximum Forward Voltage at 35 Amps DC	V <sub>FM</sub>	1.2 (Typical 1.1)					VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage	I <sub>RM</sub>	@ T <sub>c</sub> = 25 °C					μA
		@ T <sub>c</sub> = 100 °C					
Typical Thermal Resistance, Junction to Case (Note 1)	R <sub>θJC</sub>	0.8					°C/W
Maximum Reverse Recovery Time (I <sub>F</sub> = 1.0 Amp to V <sub>R</sub> = 30 Vdc) (I <sub>FM</sub> = 15 Amp, di/dt = 25 A/μs)	T <sub>RR</sub>	200 (Typ. 150) 300 (Typ. 150)					nSec
Junction Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175					°C

Notes: 1) Both Leads to Heatsink, Equal Length

Data Sheet No. MR820-1A