



KVP RVP

KILOVOLT RECTIFIER ASSEMBLIES

- MATCHED SILICON RECTIFIER ELEMENTS
- RATED CURRENT TO 1.0 AMPERES
- PRV 5,000 TO 50,000 VOLTS
- FAST RECOVERY (RVP SERIES)
- ALL APPLICABLE MIL-STD-750 TESTS
- HIGH THERMAL CONDUCTIVITY ENCAPSULATION



| EDI Type No. | Peak Reverse Voltage PRV (Volts) | Avg. Fwd. Current I_o at 25°C (Amps) | Max. Fwd Voltage Drop at 25°C and 1A. V_F (Volts) | Dimension "L" Inches Fig.3 | Dimension "C" Inches Fig.3 |
|--|----------------------------------|--|---|----------------------------|----------------------------|
| STANDARD RECOVERY | | | | | |
| KVP5 | 5,000 | 1.00 | 8 | 2.5 | 1/4 |
| KVP6 | 6,000 | 1.00 | 9 | 2.5 | |
| KVP7 | 7,000 | 1.00 | 10 | 3.0 | |
| KVP8 | 8,000 | 1.00 | 11 | 3.0 | |
| KVP9 | 9,000 | 1.00 | 14 | 3.0 | |
| KVP10 | 10,000 | 1.00 | 15 | 3.5 | 3/8 |
| KVP15 | 15,000 | 1.00 | 21 | 5.0 | 1/4 |
| KVP20 | 20,000 | .75 | 26 | 5.5 | |
| KVP25 | 25,000 | .75 | 32 | 6.0 | 1/2 |
| KVP30 | 30,000 | .75 | 39 | 6.0 | |
| KVP35 | 35,000 | .75 | 46 | 6.5 | |
| KVP40 | 40,000 | .75 | 53 | 6.5 | |
| KVP50 | 50,000 | .75 | 65 | 7.0 | |
| 200 NANOSECOND RECOVERY (FIG.4) | | | | | |
| RVP5 | 5,000 | .90 | 10 | 2.5 | 1/4 |
| RVP6 | 6,000 | .90 | 11 | 2.5 | |
| RVP7 | 7,000 | .90 | 12 | 3.0 | |
| RVP8 | 8,000 | .90 | 13 | 3.0 | |
| RVP9 | 9,000 | .90 | 16 | 3.0 | |
| RVP10 | 10,000 | .90 | 17 | 3.5 | 3/8 |
| RVP15 | 15,000 | .90 | 25 | 5.0 | 1/4 |
| RVP20 | 20,000 | .70 | 30 | 5.5 | |
| RVP25 | 25,000 | .70 | 36 | 6.0 | 1/2 |
| RVP30 | 30,000 | .70 | 43 | 6.0 | |
| RVP35 | 35,000 | .70 | 50 | 6.5 | |
| RVP40 | 40,000 | .70 | 58 | 6.5 | |
| RVP50 | 50,000 | .70 | 72 | 7.0 | |

| ELECTRICAL CHARACTERISTICS (at $T_A=25^\circ\text{C}$ Unless Otherwise Specified) | KVP SERIES STANDARD RECOVERY |
|---|------------------------------|
| Max. DC Reverse Current @ PRV and 25°C, I_R | 5 μA |
| Max. DC Reverse Current @ PRV and 100°C, I_R | 100 μA |
| Ambient Operating Temperature Range, T_A | -55°C to +150°C |
| Storage Temperature Range, T_{STG} | -55°C to +150°C |
| Max. One-Half Cycle Surge Current, I_{FM} (Surge) @ 60Hz | 50 Amps |
| Forward Current Repetitive Peak, I_{FRM} | 10 Amps |

| ELECTRICAL CHARACTERISTICS (at $T_A=25^\circ\text{C}$ Unless Otherwise Specified) | RVP SERIES FAST RECOVERY |
|---|--------------------------|
| Max. DC Reverse Current @ PRV and 25°C, I_R | 5 μA |
| Max. DC Reverse Current @ PRV and 100°C, I_R | 250 μA |
| Max. Reverse Recovery Time, T_{rr} (Fig.4) | 300 nanosec |
| Ambient Operating Temperature Range, T_A | -55°C to +150°C |
| Storage Temperature Range, T_{STG} | -55°C to +150°C |
| Max. One-Half Cycle Surge Current, I_{FM} (Surge) @ 60Hz | 30 Amps |
| Forward Current Repetitive Peak, I_{FRM} | 8 Amps |

EDI reserves the right to change these specifications at any time without notice.

FIG.1
OUTPUT CURRENT vs AMBIENT TEMPERATURE

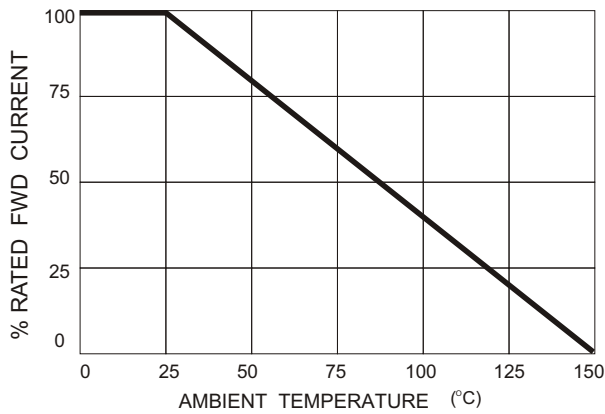


FIG.2
NON-REPETITIVE SURGE CURRENT RATINGS

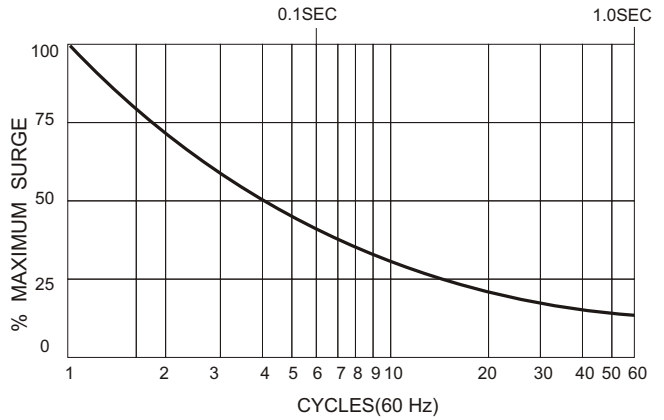
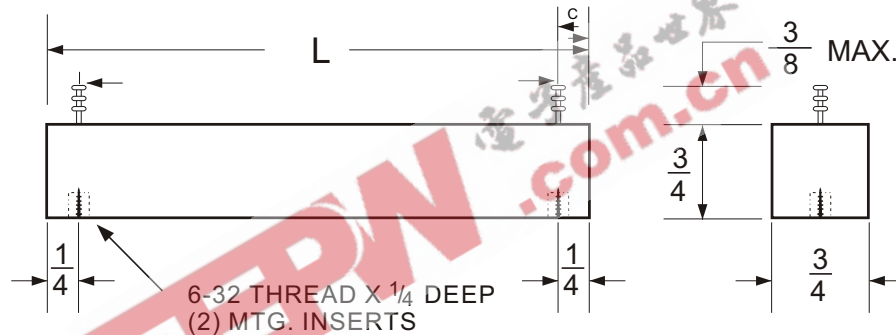


FIG.3
CASE STYLE A

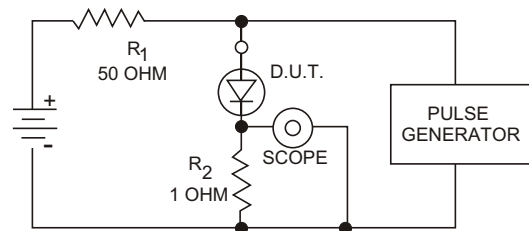
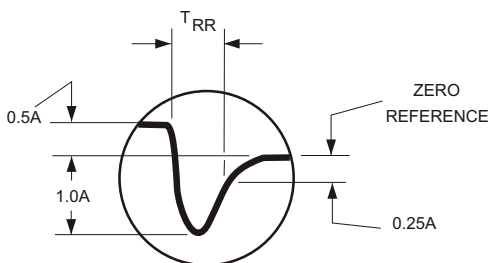


(ALL DIMENSIONS IN INCHES)

It is recommended that a proper heat sink be used on the terminals of this device between the body and the soldering point to prevent damage from excess heat.

TEST CIRCUIT
FIG.4

TYPICAL REVERSE RECOVERY WAVEFORM



R_1, R_2 NON-INDUCTIVE RESISTORS
PULSE GENERATOR - HEWLETT PACKARD 214A OR EQUIV.
1KC REP.RATE, 10 μ SEC. PULSE WIDTH
ADJUST PULSE AMPLITUDE FOR PEAK I_R

ELECTRONIC DEVICES, INC. DESIGNERS AND MANUFACTURERS OF SOLID STATE DEVICES SINCE 1951.

21 GRAY OAKS AVENUE * YONKERS, NEW YORK 10710 914-965-4400 * FAX 914-965-5531 * 1-800-678-0828

e-mail:sales@ediodes.com * website: <http://www.ediodes.com>