



KHP RHP

KILOVOLT HIGH CURRENT RECTIFIER ASSEMBLIES

- MATCHED SILICON RECTIFIER ELEMENTS
- RATED CURRENT TO 3.0 AMPERES
- PRV 5,000 TO 50,000 VOLTS
- FAST RECOVERY (RHP SERIES)
- ALL APPLICABLE MIL-STD-750 TESTS
- HIGH THERMAL CONDUCTIVITY ENCAPSULATION



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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 3 Amps V_F (Volts)	Dimension "L" Inches Fig.3	Dimension "W" Inches Fig.3	Case Style Fig.3
STANDARD RECOVERY						
KHP5	5,000	3.00	8	4.00	1.0	A
KHP6	6,000	2.75	9	4.75	1.0	A
KHP7	7,000	2.75	10	5.50	1.0	A
KHP8	8,000	2.75	11	6.00	1.0	A
KHP9	9,000	2.50	14	6.50	1.0	A
KHP10	10,000	2.50	15	7.00	1.0	A
KHP15	15,000	2.50	21	4.00	2.0	B
KHP20	20,000	2.25	28	6.00	2.0	B
KHP25	25,000	2.25	36	8.00	2.0	B
KHP30	30,000	2.25	42	4.00	3.0	B
KHP35	35,000	2.25	49	6.00	3.0	B
KHP40	40,000	2.25	63	8.00	3.0	B
KHP50	50,000	2.25	70	6.00	4.0	B
200 NANOSECOND RECOVERY (FIG.4)						
RHP5	5,000	2.50	10	4.00	1.0	A
RHP6	6,000	2.50	11	4.75	1.0	A
RHP7	7,000	2.50	12	5.50	1.0	A
RHP8	8,000	2.50	13	6.00	1.0	A
RHP9	9,000	2.50	16	6.50	1.0	A
RHP10	10,000	2.50	17	7.00	1.0	A
RHP15	15,000	2.25	25	4.00	2.0	B
RHP20	20,000	2.25	33	6.00	2.0	B
RHP25	25,000	2.25	42	8.00	2.0	B
RHP30	30,000	2.25	50	4.00	3.0	B
RHP35	35,000	2.25	58	6.00	3.0	B
RHP40	40,000	2.25	65	8.00	3.0	B
RHP50	50,000	2.25	82	6.00	4.0	B

ELECTRICAL CHARACTERISTICS (at $T_A=25^\circ\text{C}$ Unless Otherwise Specified)	KHP 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	400 Amps
Forward Current Repetitive Peak, I_{FRM}	40 Amps

ELECTRICAL CHARACTERISTICS (at $T_A=25^\circ\text{C}$ Unless Otherwise Specified)	RHP 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)	200 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	240 Amps
Forward Current Repetitive Peak, I_{FRM}	25 Amps

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

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FIG.1
OUTPUT CURRENT vs AMBIENT TEMPERATURE

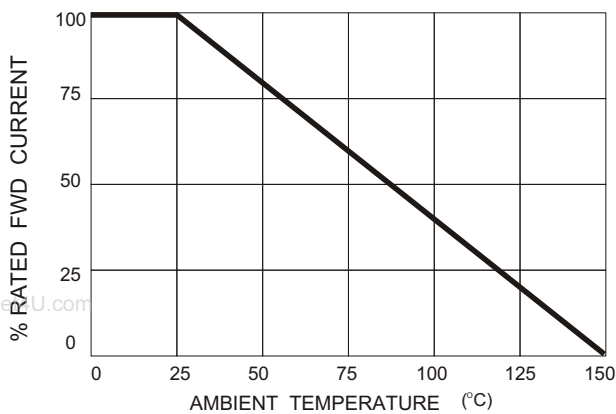


FIG.2
NON-REPETITIVE SURGE CURRENT

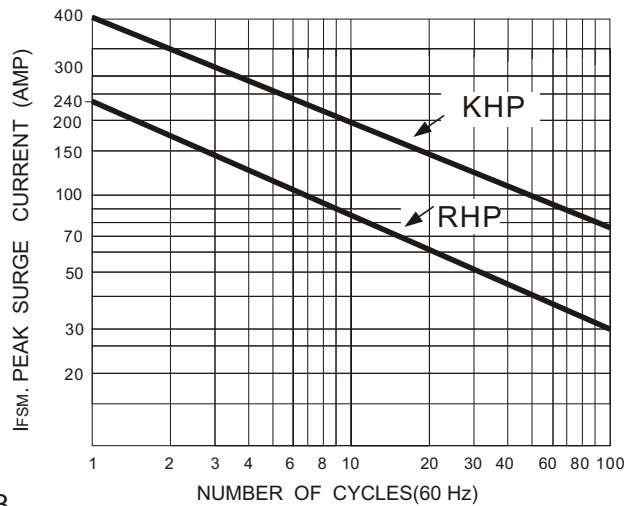
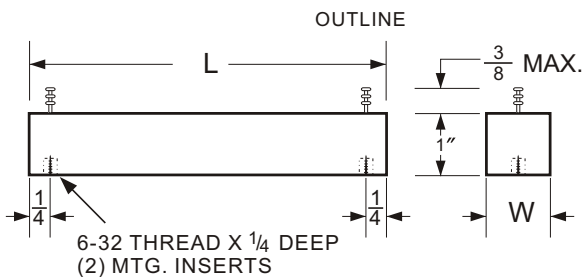
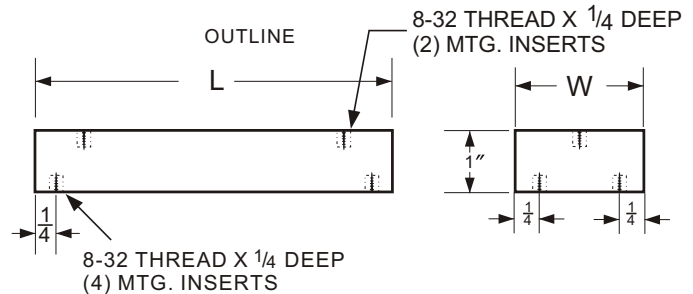


FIG.3
PACKAGE STYLE

CASE STYLE A



CASE STYLE B

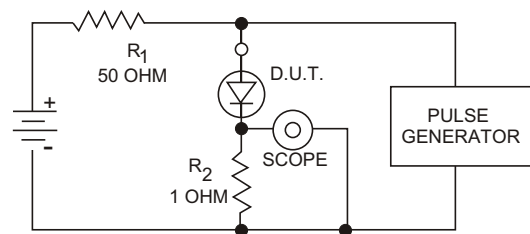
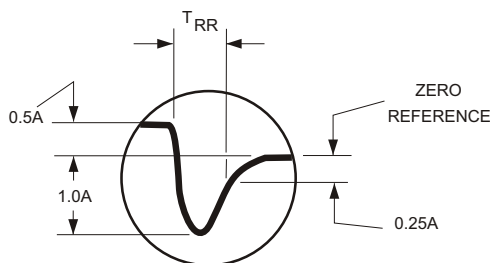


It is recommended that a proper heat sink be used on the terminals of this device between the body and the soldering point to prevent damage from excess heat.

TEST CIRCUIT

FIG.4

TYPICAL REVERSE RECOVERY WAVEFORM



R₁, R₂ NON-INDUCTIVE RESISTORS
PULSE GENERATOR - HEWLETT PACKARD 214A OR EQUIV.
1KC REP.RATE, 10 μSEC. PULSE WIDTH
ADJUST PULSE AMPLITUDE FOR PEAK I_R

Prior to the manufacture of these assemblies, the individual silicon junction is measured for maximum recovery time in the test circuit shown.

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

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