International Semiconductor, Inc.

100 mA SILICON CARTRIDGE RECTIFIERS

- SMALL SIZE MOLDED PACKAGE
- PRV 8,000 TO 50,000 VOLTS
- FAST RECOVERY (HVCR SERIES)
- LOW LEAKAGE

ISI Type No.	Peak Reverse Voltage, PRV (Volts)	Max. Fwd. Voltage Drop at 25°C and 100mA V_F (Volts)	Length "L" FIG. 3
STANDARD RECOVERY			
HVC08	8,000	13	1.00
HVC10	10,000	13	1.00
HVC12	12,000	13	1.00
HVC15	15,000	20	1.63
HVC20	20,000	26	2.13
HVC25	25,000	33	2.63
HVC30	30,000	40	3.13
HVC35	35,000	46	3.63
HVC40	40,000	53	4.13
HVC45	45,000	60	4.63
HVC50	50,000	66	5.13
200 NANOSECOND RECOVERY FIG. 4			
HVC08R	8,000	20	1.00
HVC10R	10,000	20	1.00
HVC12R	12,000	20	1.00
HVC15R	15,000	30	1.63
HVC20R	20,000	40	2.13
HVC25R	25,000	50	2.63
HVC30R	30,000	60	3.13
HVC35R	35,000	70	3.63
HVC40R	40,000	80	4.13
HVC45R	45,000	90	4.63
HVC50R	50,000	100	5.13

ELECTRICAL CHARACTERISTICS at T_A = 25°C Unless Otherwise Specified	HVC SERIES STANDARD RECOVERY
Max. DC Reverse Current @ PRV and 25°C, I_R	2 μA
Max. DC Reverse Current @ PRV and 100°C, I_R	100 μA
Ambient Operating Temperature Range, T_A	-55°C to +125°C
Storage Temperature Range, T_{STG}	-55°C to +150°C
Max. One-Half Cycle Surge Current, I_{FM}(Surge) @ 60 Hz	10 Amps
Forward Current Repetitive Peak, I_{FRM}	3 Amps

ELECTRICAL CHARACTERISTICS at T_A = 25°C Unless Otherwise Specified	HVC SERIES FAST RECOVERY
Max. DC Reverse Current @ PRV and 25°C, I_R	2 μA
Max. DC Reverse Current @ PRV and 100°C, I_R	100 μA
Max. Reverse Recovery Time, t_{rr} (Fig. 4)	200 nanosec
Ambient Operating Temperature Range, T_A	-55°C to +125 °C
Storage Temperature Range, T_{STG}	-55°C to +150°C
Max. One-Half Cycle Surge Current, I_{FM}(Surge) @ 60 Hz	10 Amps
Forward Current Repetitive Peak, I_{FRM}	3 Amps

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

Corporate Offices:
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FIG. 1
OUTPUT CURRENT vs. AMBIENT TEMPERATURE

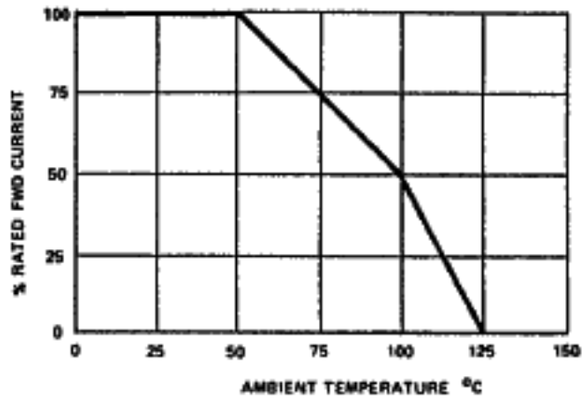


FIG. 2
NON-REPETITIVE SURGE CURRENT RATINGS

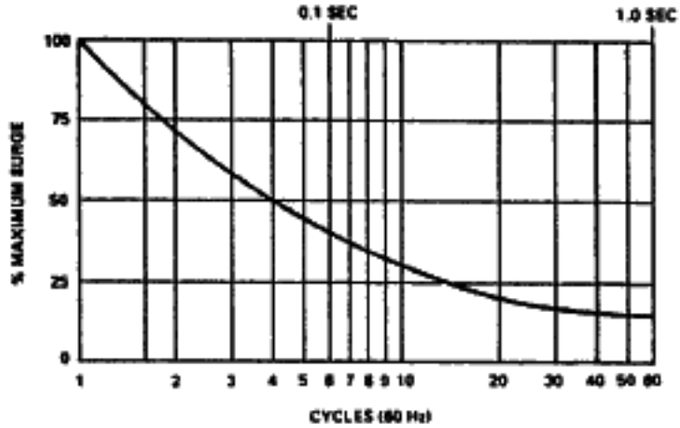
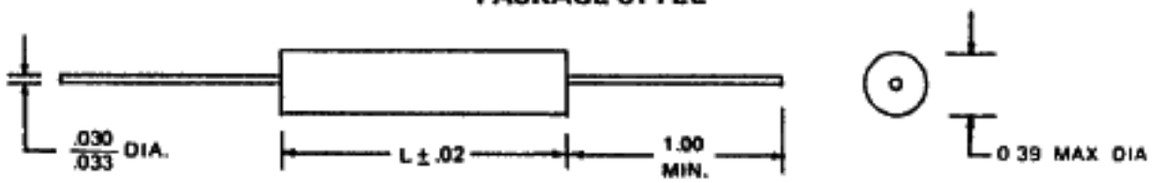


FIG. 3
PACKAGE STYLE



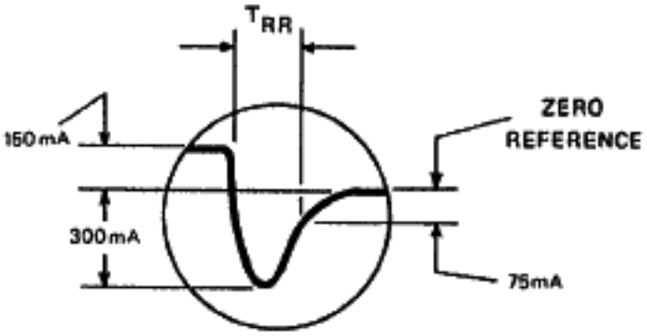
ALL DIMENSIONS IN INCHES

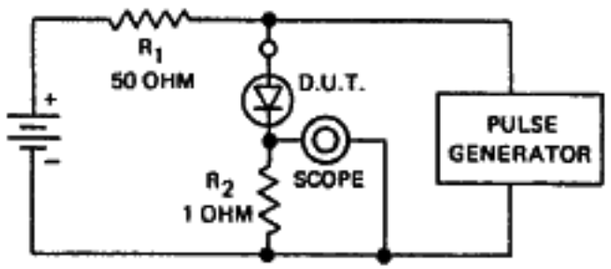
Maximum lead and terminal temperature for soldering, 3/8 inch from case, 5 seconds at 250°C.

TEST CIRCUIT

FIG. 4

TYPICAL REVERSE RECOVERY WAVEFORM





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

Reverse recovery time measured on individual rectifiers prior to assembly.

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