

HCHR Series Miniature DC-DC Converters



Specifications

Input:

Voltage: (see chart for selection)
Current: see Fig. 1
Reflected ripple: see Fig. 2

Output:

Voltage and Current: (see chart for selection)
Output voltage varies directly with the input voltage over specified range.
Voltage accuracy: maximum deviation from nominal output voltage specified in Figure 3.

Minimum Load: 300mW.

Regulation:

Line Unregulated
Load (1/2 to FL) See Fig. 4
Load (300mW to FL) 2X (1/2 to FL) typ.

Ripple:

(see fig. 5)
Frequency: 24KHz typ.
22KHz (5V and 6V input) typ.

Polarity:

Single output units may be used as positive or negative supplies.
Dual output units have common return.

Isolation:

Input to output 600VDC
Insulation Resistance 100 megohms min.

Efficiency:

(see Fig. 6)

Environmental

Operating temp.: -55°C to +100°C baseplate.
Storage temp.: -55°C to +125°C
Case rise: 40°C/watt dissipation (typ.)

Mechanical:

Terminals: P.C. type
Case: nickel plated copper
Encapsulation: Epoxy
Weight: 0.45 oz.

MTBF:

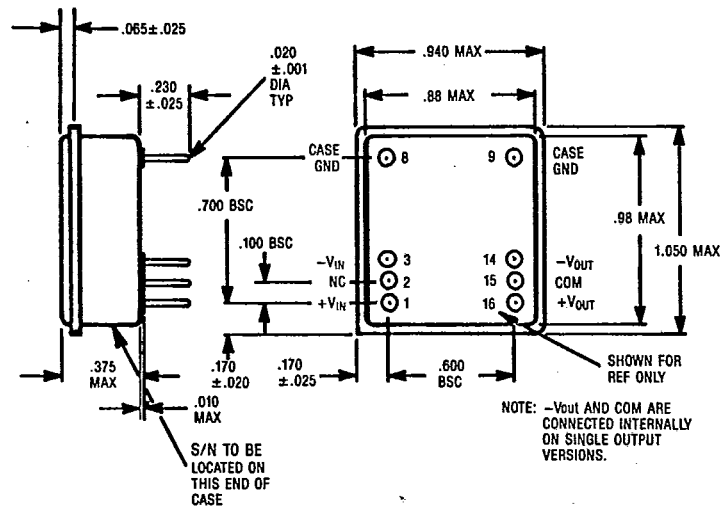
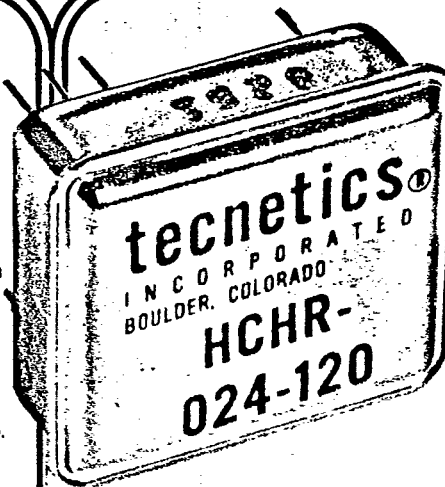
Value dependent upon environment and component certification.

Part Number:

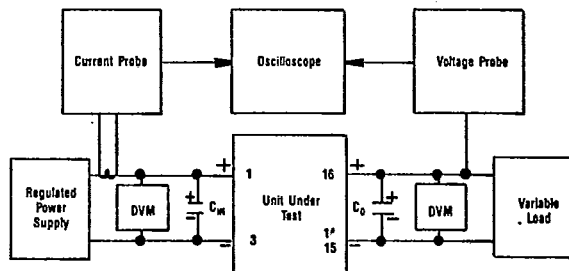
HCHR-XXX- X XX
Series Vout No Out Vin

Features

- Operates from narrow input range to optimize performance
- A wide selection of input and output voltages available
- Other voltages available on special order
- All discrete components in miniature 2X dip package

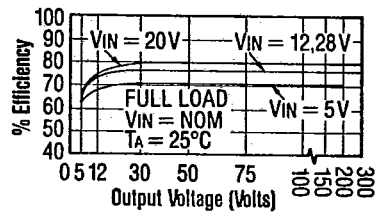
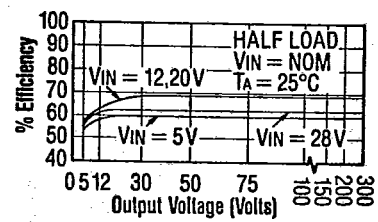
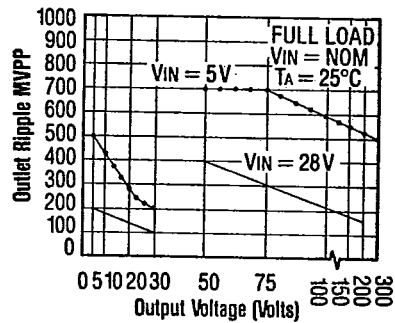
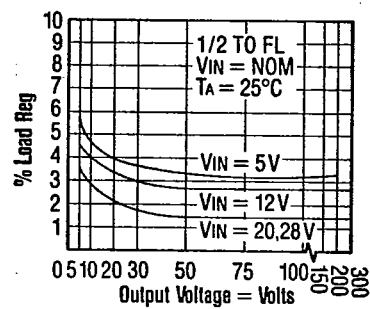
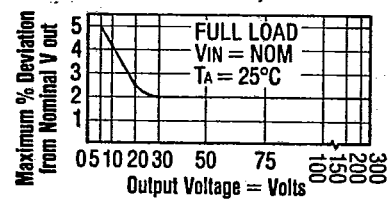
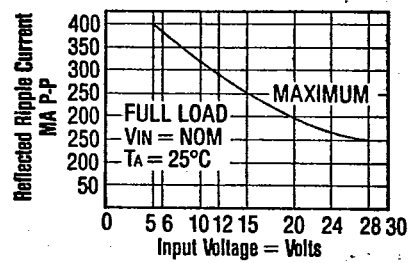
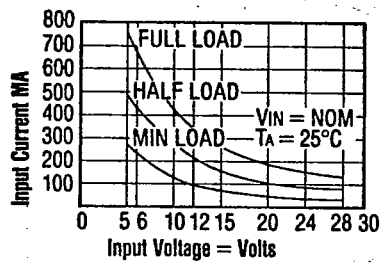


TEST CONFIGURATION



For Single Output Units			
C _{in} = 47mF	35V	Dash	Nos. 105, 106
C _{in} = 22mF	35V	Dash	Nos. 112, 115, 120, 124, 128
C _{in} = 15mF	75V	Dash	Nos. 148
C _o = 47mF	35V	Model	Nos. 005 thru 010
C _o = 22mF	35V	Model	Nos. 012 thru 030
C _o = 0.25mF	400V	Model	Nos. 050 thru 300

For double output units (pin 15 com ret)
C_{in} same as single output units
C_o = 22mF, 35V (X2) all units



Single Output

Model Number	Output Voltage VDC (Nom.)	Output Current mA (Max.)	Input Voltage (VDC)		Output Current mA (Max.)	Input Voltage (VDC)				
			5±1	6±1		12±2	15±2	20±3	24±4	28±4
005	5	400	-105	-106	500	-112	-115	-120	-124	-128
006	6	345	-105	-106	428	-112	-115	-120	-124	-128
007	7	306	-105	-106	377	-112	-115	-120	-124	-128
008	8	276	-105	-106	339	-112	-115	-120	-124	-128
009	9	253	-105	-106	309	-112	-115	-120	-124	-128
010	10	235	-105	-106	285	-112	-115	-120	-124	-128
012	12	208	-105	-106	250	-112	-115	-120	-124	-128
015	15	167	-105	-106	200	-112	-115	-120	-124	-128
018	18	139	-105	-106	167	-112	-115	-120	-124	-128
020	20	125	-105	-106	150	-112	-115	-120	-124	-128
024	24	104	-105	-106	125	-112	-115	-120	-124	-128
028	28	89	-105	-106	108	-112	-115	-120	-124	-128
030	30	83	-105	-106	100	-112	-115	-120	-124	-128
050	50	50	-105	-106	60	-112	-115	-120	-124	-128
075	75	33	-105	-106	40	-112	-115	-120	-124	-128
100	100	25	-105	-106	30	-112	-115	-120	-124	-128
150	150	17	-105	-106	20	-112	-115	-120	-124	-128
200	200	13	-105	-106	15	-112	-115	-120	-124	-128
300	300	-	-	-	10	-112	-115	-120	-124	-128

Double Output

Model Number	Output Voltage VDC (Nom.)	Output Current mA (Max.)	Input Voltage (VDC)		Output Current mA (Max.)	Input Voltage (VDC)				
			5±1	6±1		12±2	15±2	20±3	24±4	28±4
005	±5	+200	-205	-206	±250	-212	-215	-220	-224	-228
006	±6	±172	-205	-206	±214	-212	-215	-220	-224	-228
007	±7	±153	-205	-206	±188	-212	-215	-220	-224	-228
008	±8	±138	-205	-206	±169	-212	-215	-220	-224	-228
009	±9	±126	-205	-206	±154	-212	-215	-220	-224	-228
010	±10	±117	-205	-206	±142	-212	-215	-220	-224	-228
012	±12	±104	-205	-206	±125	-212	-215	-220	-224	-228
015	±15	±83	-205	-206	±100	-212	-215	-220	-224	-228
018	±18	±69	-205	-206	±83	-212	-215	-220	-224	-228
020	±20	±62	-205	-206	±75	-212	-215	-220	-224	-228
024	±24	±52	-205	-206	±62	-212	-215	-220	-224	-228



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