

HCHR SERIES

Single and Dual Output

- Narrow Input Range
- Optimum Performance
- Wide Selection of Inputs/Outputs
- 9 watts per Cubic Inch
- All Discrete Components
- 2x DIP Package

The HCHR series miniature DC/DC converters consists of 30 single and dual output models. These nine watt per cubic inch converters operate from a variety of input voltages from 5 to 28 VDC and provide output voltages from 5 to 300 VDC. Other features include 2x DIP package, input/output isolation, up to 80% efficiency and an operating temperature range of -55°C to $+100^{\circ}\text{C}$. Constructed to withstand severe environmental conditions, these models have been used successfully in a range of applications from subsea to avionics, and space. Environmental Stress Screening is also available at the factory as an option. For more detailed specifications, please contact the factory for a Tecnetics catalog.

STOCKED BY YOUR LOCAL DISTRIBUTOR
(SEE LIST ON PAGES 173 & 174)



(303) 442-3837

SPECIFICATIONS

All Specifications Typical at Nominal Line, Full Load and 25°C Unless Otherwise Noted.

OUTPUT SPECIFICATIONS

Voltage and Current.....	See Chart
Voltage Accuracy ¹	5%, max.
Minimum Load	300 mW
Regulation	
Line.....	Unregulated
Load, 1/2L-FL.....	See Graph
Ripple	See Graph
Operating Frequency.....	24 kHz
5V, 6V Input	22 kHz

INPUT SPECIFICATIONS

Input Voltage.....	See Table
Reflected Ripple, 5V Input.....	400 mA, max.
28V Input.....	250 mA, max.

GENERAL SPECIFICATIONS

Isolation	
Input to Output.....	600 VDC
Insulation Resistance.....	100 megohm, min.
Efficiency	78%

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature, baseplate	-55°C to $+100^{\circ}\text{C}$
Storage Temperature.....	-55°C to $+125^{\circ}\text{C}$
Case Rise	$40^{\circ}\text{C}/\text{watt}$ dissipation

PHYSICAL SPECIFICATIONS

Terminals	PC Type
Case	Nickel Plated Copper
Encapsulation	Epoxy
Weight	0.45 oz.
MTBF	Consult Factory

NOTE:

1. Output Voltage varies directly with the input voltage over specified range.



2 to 3 Watt Mil-Spec DC/DC Converters

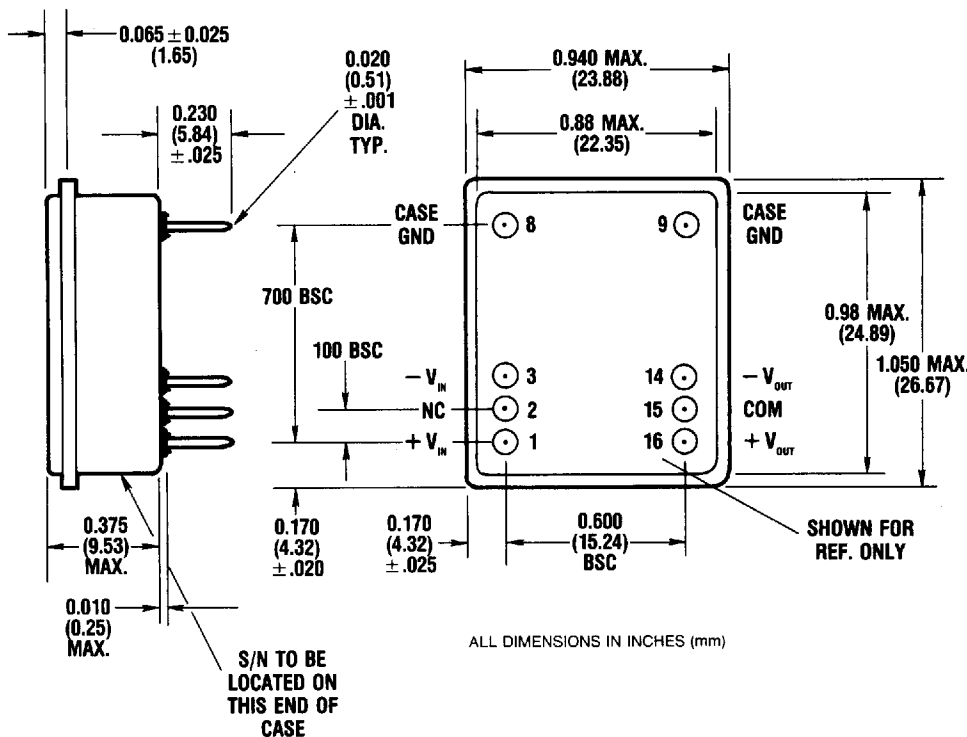
INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT POWER	PROTECTION		RIPPLE & NOISE	REGULATION		NO. OF OUTPUTS	SERIES NUMBER
			OV	OL		LINE	LOAD		
SINGLE OUTPUT									
5 VDC	5-200 VDC	2.5W	N	N	See Graph	Unreg	See Graph	1	HCHR-XXX-105
6 VDC	5-200 VDC	2.5W	N	N	See Graph	Unreg	See Graph	1	HCHR-XXX-106
12 VDC	5-300 VDC	3W	N	N	See Graph	Unreg	See Graph	1	HCHR-XXX-112
15 VDC	5-300 VDC	3W	N	N	See Graph	Unreg	See Graph	1	HCHR-XXX-115
20 VDC	5-300 VDC	3W	N	N	See Graph	Unreg	See Graph	1	HCHR-XXX-120
24 VDC	5-300 VDC	3W	N	N	See Graph	Unreg	See Graph	1	HCHR-XXX-124
28 VDC	5-300 VDC	3W	N	N	See Graph	Unreg	See Graph	1	HCHR-XXX-128
DUAL OUTPUT									
5 VDC	±5-±24 VDC	2W	N	N	See Graph	Unreg	See Graph	2	HCHR-XXX-205
6 VDC	±5-±24 VDC	2W	N	N	See Graph	Unreg	See Graph	2	HCHR-XXX-206
12 VDC	±5-±24 VDC	2.5W	N	N	See Graph	Unreg	See Graph	2	HCHR-XXX-212
15 VDC	±5-±24 VDC	2.5W	N	N	See Graph	Unreg	See Graph	2	HCHR-XXX-215
20 VDC	±5-±24 VDC	2.5W	N	N	See Graph	Unreg	See Graph	2	HCHR-XXX-220
24 VDC	±5-±24 VDC	2.5W	N	N	See Graph	Unreg	See Graph	2	HCHR-XXX-224
28 VDC	±5-±24 VDC	2.5W	N	N	See Graph	Unreg	See Graph	2	HCHR-XXX-228

Single Output Models HCHR-XXX-1--

"XXX"	Output Voltage	"XXX"	Output Voltage
005	5 VDC	024	24 VDC
006	6 VDC	028	28 VDC
007	7 VDC	030	30 VDC
008	8 VDC	050	50 VDC
009	9 VDC	075	75 VDC
010	10 VDC	100	100 VDC
012	12 VDC	150	150 VDC
015	15 VDC	200	200 VDC
018	18 VDC	300	300 VDC
020	20 VDC		

Dual Output Models HCHR-XXX-2--

"XXX"	Output Voltage
005	± 5 VDC
006	± 6 VDC
007	± 7 VDC
008	± 8 VDC
009	± 9 VDC
010	± 10 VDC
012	± 12 VDC
015	± 15 VDC
018	± 18 VDC
020	± 20 VDC
024	± 24 VDC



Pin	Function
1	+V Input
1	N/C
3	-V Input
8	Case Ground
9	Case Ground
14	-V Output*
15	Common*
16	+V Output

Note: -V_{out} and Com are connected internally on single output versions.

