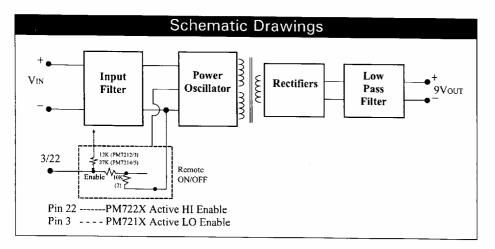
Ethernet DC/DC Converters



	Electri	cai c	pecifications				
Input Specifications							
Parameter	Model		<u>Conditions</u>	Min	Тур	Max	Units
Input Voltage-Range	PM72X2/X3			4.5	5.0	5.5	Vdc
Input Voltage-Range	PM72X4/X5			10.8	12.0	13.2	Vdc
Reflected Ripple Current	PM72X2/X3		0.25Ω In Series			60	mApp
Reflected Ripple Current	PM72X4/X5		0.25Ω In Series			30	mApp
Output Specifications							
Parameter	Model		Conditions	Min	Tvo	Max	Units
Output Voltage-Initial Tolerance	All	٧	n-NOM, lout-200mA	8.55	9.0	9.45	V
Output Regulation	All		See Regulation Graphs				
Output Current-Full Load Rating	All		Continous 0° to 70°C	80		200	mA
Output Current-Peak Rating	All		Continous at 25°C	80		225	mA
Ripple and Noise	All	All 20MHz BW, Full Load			6	100	mVpլ
Remote ON/OFF: Active LO Enable	PM721X	PM721X Pin 3 Voltage for ON (5mA)				0.8	Vdc
TTL Compatible	PM721X	the second to the last (or open)				15	Vdc
Remote ON/OFF: Active HI Enable	PM722X					15	Vdc
TTL Compatible	PM722X	Tomas ion of the opposit				0.8	Vdc
Temperature Coefficient	All	0 10700				± 0.02	%/°C
Overloads and Short Circuit	All	All					
General Specifications							
Parameter	Model		Conditions	Min	Тур	. Max	Unita
Efficiency	PM72X2/X3		70	74		%	
Efficiency	PM72X4/X5		74	78		% %	
Input/Output Isolation Voltage	All	Vin = 12.0V, 1o = 200mA		2000			Vac
Failures in Time (FIT)	PM7202	Belicore TR-NWT-000332			260		FIT
(Failures/Billions Hours)	PM7224		40°C, lout~200mA		340		FIT
, andread printerial Hours						·	'
	s						
Environmental Specification	s <u>Model</u>		Conditions	Min	Τγρ	Max	Unit
•		1	Conditions	Min 0	<i>Тур</i> 	<i>Max</i>	T
Environmental Specification Parameter	Model		Conditions			$\overline{}$	<i>Unit</i> . °C °C
Environmental Specification Parameter Operating Temperature Range	<i>Model</i>		Conditions Non-condensing	0		70	° C

Ethernet

Valor's DC/DC Converters for Ethernet applications provide a low cost solution in 5V or 12V inputs with 9V output for use with all coaxial transceiver chips. The new, improved PM7202 product series provides a drop-in replacement to the PM7102 with additional features and a lower price.

The unregulated DC/DC converters of this product group feature a low component count. The PM7212 through PM7215 units incorporate circuitry for an active LO enable function to power the device on and off.

The PM7222 through PM7225 converters provide an active HI enable function. The logic levels for both of these groups are TTL compatible and will work with CMOS chips due to their exceptionally low logic currents.

Features:

- FULL FEATURED, COST-EFFECTIVE DESIGN
- REMOTE ON/OFF AVAILABLE WITH ACTIVE HI OR LO ENABLE
- CONTINUOUS SHORT CIRCUIT AND OVERLOAD PROTECTION
- 2000VAC ISOLATION STANDARD
- TWO INDUSTRY STANDARD PIN-OUTS





Ethernet DC/DC Converters

Input Pin-Out				Remote ON/OFF			
Input Voltage	+ Vin	-Vin	None	Active LO Enable		Active HI Enable	
5V	1 & 24	12 & 13	PM7202	PM7212		PM7222	
12V	1 & 24	12 & 13	PM7204	PM7214		PM7224	
5V	1 & 2	23 & 24	PM7203	PM7213		PM7223	
12V	1 & 2	23 & 24	PM7205	PM7215		PM7225	
Controller Chip	Controller Chip Manufacturer		All	AMD	Intel	National	
Part Number	,		All	PCnet-ISA	82595	AT/LANTIC	
				AM79C960		DP83905	

Application Information

The PM7202, PM7203, PM7204 and PM7205 are drop-in replacements for their counterparts from the PM7102 series. The remaining components in this product family are designed to take full advantage of the new "combo" controller chips by providing a direct interface that can power the converter ON/OFF. This eliminates the need for external transistors/FETs to perform this function which degrades regulation and efficiency.

The PM7202 series offers several new features in addition to those provided by its predecesor, the PM7102. Current limiting allows the converter to continue operating after the removal of an output overload or short circuit. Efficiencies in the PM7202 series have been increased to approximately 75%, resulting in cooler operation and lower input current. (Efficiencies in the low 80% range can also be provided by special request.) The lead-trim on these converters has been reduced to $0.110\pm.005$ " to eliminate the need for post-solder trimming operations.

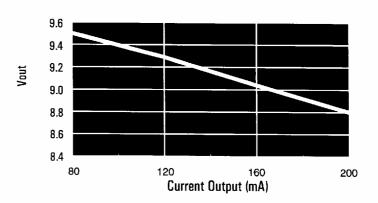
The isolation voltage of this series has been increased to 2000Vac for both pinouts. This exceeds the IEEE 802.3 requirements for 10Base-2 (500Vac) and 10Base-5 (1500Vac) applications and benefits board level ESD immunity. The PM7203/13/23 and PM7205/15/25 use an industry-standard pin-out that is common to most regulated Valor converters. This pin-out places input and output at opposite ends of the package, optimizing isolation voltage, ESD immunity, EMI rejection and board layout. The more common pin-out utilized in the PM7202/12/22 and PM7204/14/24 places input and output pins adjacent to each other (11 and 12, 13 and 14). Careful attention must be paid to these pads/traces to fully utilize the 2000Vac capability of these parts.

Ethernet

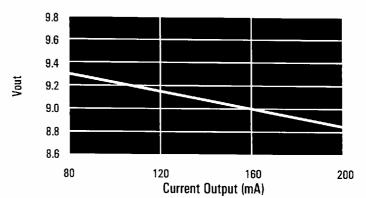
Ethernet DC/DC Converters

Typical Performance Data

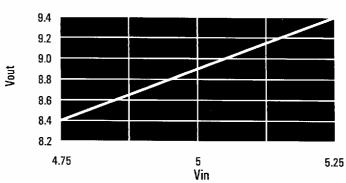
Load Regulation at 5Vin



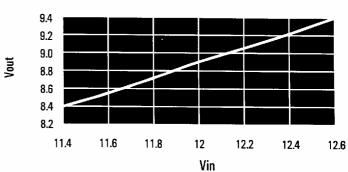
Load Regulation at 12Vin



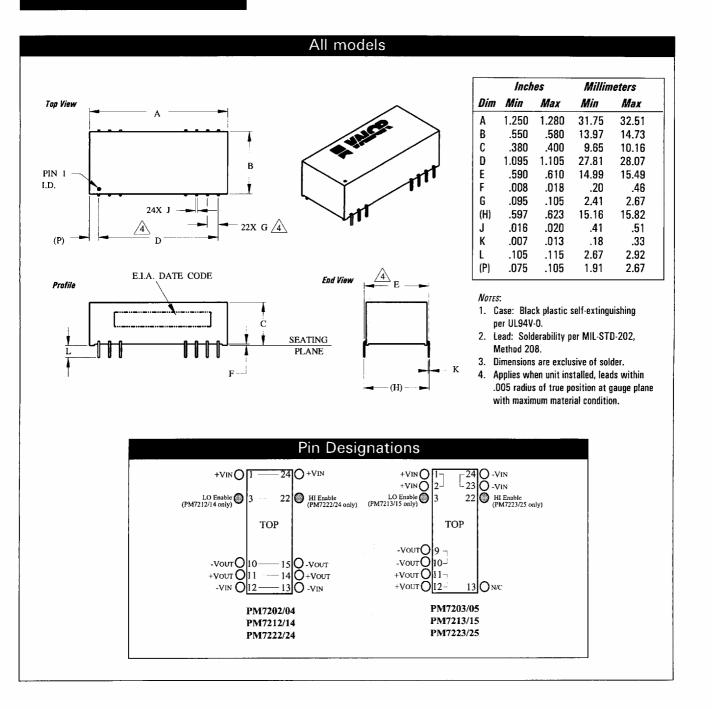
5V Line Regulation Load = 200mA



12V Line Regulation Load = 200mA



Ethernet DC/DC Converters





Valor Electronics, Inc. A GTI Company

NORTH AMERICA 9715 Business Park Avenue San Diego, CA 92131-1642 tel 800.31-VALOR fax 619.537.2525

ASIA Flat B, 7/F., K.K. Industrial Building 5 Mok Cheong Street Tokwawan, Kowloon, Hong Kong tel 852.2333.0127 fax 852.2363.6206

EUROPE Steinstraße 68, 81667 München Germany tel 49.89.4587040 fax 49.89.484743

@ 1995 Yalor Electronics, Inc. Yalor Electronics, the Yalor logomark and logotype, and product names are trademarks of Yalor Electronics, Inc. All other logos, company names or product names are registered trademarks of their respective companies. Specifications subject to change without notice. All rights reserved

E/DC101-00/111095