

V7W-12 Series

12W 4:1 Regulated Single & Dual output

Features

- Wide 4:1 Input Range
- Full SMD Technology
- 1500 VDC Isolation
- Continuous Short Circuit Protection
- Efficiency up to 87%
- -40 ~ 85°C Operation Temperature Range



The V7W series is a family of cost effective 10~15W single & dual output DC-DC converters. These converters combine nickel-coated copper package in a 2"x1" compatible case with high performance features such as 1500 VDC input/output isolation voltage, continuous short circuit protection with automatic restart and tight line / load regulation. Wide range devices operate over 4:1 input voltage range providing stable output voltage. Devices are encapsulated using flame retardant resin. Input voltages of 24 and 48 with output voltage of 3.3,5,12,±5,±12, ±15Vdc. High performance features include high efficiency operation up to 87% and output voltage accuracy of ±1% maximum. Standard features include an input range of ±10% tolerance and low output noise and ripple.

All specifications typical at Ta=25°C, nominal input voltage and full load unless otherwise specified

OUTPUT SPECIFICATIONS	
Voltage Accuracy	±1%
Line Regulation	±0.5%
Load Regulation (10% to 100% Loading)	±0.5%
Ripple & Noise (20 Mhz bandwidth)	75mV pk-pk
Current Limiting	140% of max. Iout
Short Circuit Protection	Indefinite(Automatic Recovery)
Temperature Coefficient	±0.02%/°C
Capacitor Load	See table

INPUT SPECIFICATIONS	
Voltage Range	See table
Max. Input Current	See table
No-Load Input Current	See table
Input Filter	PI Type
Input Reflected Ripple rms thru 12uH inductor,5Hz to20MHz	35mA rms

PHYSICAL SPECIFICATIONS	
Case Material	Nickel-coated Copper
Base Material	Epoxy encapsulated(UL94V-0 rated)
Pin Material	Φ0.5mm Brass Solder-coated
Potting Material	Epoxy (UL94V-0 rated)
Weight	30.0g
Dimensions	2.00"x1.00"x0.40"

EMI SPECIFICATIONS	
Radiated Emissions	

GENERAL SPECIFICATIONS	
Efficiency	See table
I/O Isolation Voltage	1500Vdc
I/O 1 min(flash tested for 1 sec)	1500Vdc
Case/Input&Output	1000Vdc
I/O Isolation Capacity	1200 pF Typ.
I/O Isolation Resistance	1000M Ohm
Switching Frequency	Fixed 300KHz
Humidity	95% rel H
Reliability Calculated MTBF	>1.121 Mhrs
Safety Standard	IEC 60950-1:2001
Safety Approvals	
Remote On/Off	ON:2.5 ... 5.5VDC or open circuit OFF:-0.7 ... 0.8VDC or Short circuit pin 2 and pin 6 OFF idle current:2.5mA Typ.

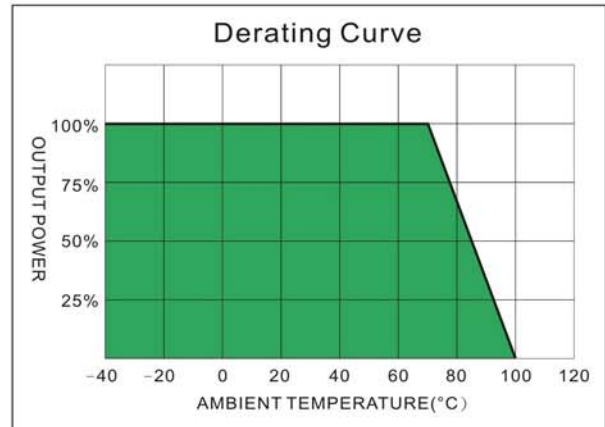
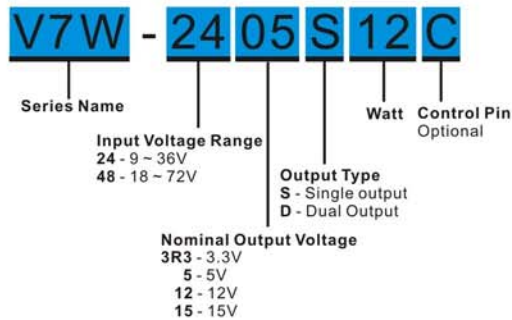
ENVIRONMENT SPECIFICATIONS	
Operating Temperature	-40°C~85°C
Case Temperature	100°C
Storage Temperature	-40°C~125°C
Cooling	Nature Convection

ABSOLUTE MAXIMUM RATINGS	
Input Voltage	
24 Modes	-0.7~40 Vdc
48 Modes	-0.7~75 Vdc
Operating Amb. Temperature	-40°C~85°C
Case Temperature	100°C
Storage Temperature	-40°C~125°C
Lead Soldering Temperature	260°C
1.5mm from case 10 sec.	

The information and specifications contained in this data sheet are believed to be correct at time of publication. However, SCHMID-MULTITECH GmbH accepts no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice. No rights under any patent accompany the sale of any such product(s) or information contained herein.

V7W - 12W 4:1 Regulated Single & Dual output

PART NUMBER STRUCTURE



MODEL SELECTION GUIDE

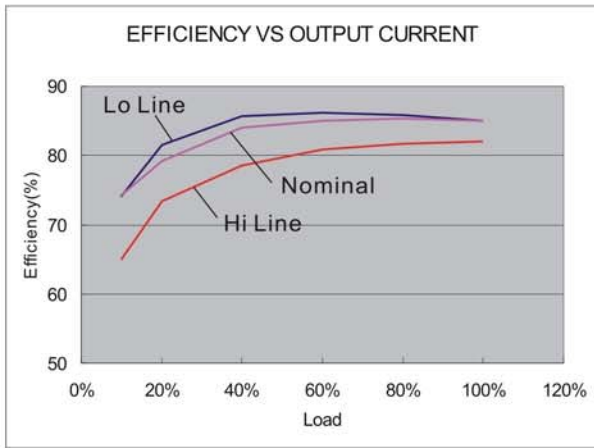
MODEL NUMBER	INPUT			OUTPUT		EFFICIENCY @FL(%)	Capacitor Load(μF)
	Voltage Range (Vdc)	No-Load Current	Full Load Current	Voltage(Vdc)	Current(mA)		
V7W-243R3S12	9-36	25	412	3.3	2400	80	3300
V7W-2405S12	9-36	25	609	5.0	2400	82	3300
V7W-2412S12	9-36	25	588	12.0	1000	85	680
V7W-2415S12	9-36	25	588	15.0	800	85	470
V7W-2405D12	9-36	25	609	±5.0	±1200	82	±2200
V7W-2412D12	9-36	25	588	±12.0	±500	85	±470
V7W-2415D12	9-36	25	588	±15.0	±400	85	±330
V7W-483R3S12	18-72	20	206	3.3	2400	80	3300
V7W-4805S12	18-72	20	304	5.0	2400	82	3300
V7W-4812S12	18-72	20	294	12.0	1000	85	680
V7W-4815S12	18-72	20	294	15.0	800	85	470
V7W-4805D12	18-72	20	304	±5.0	±1200	82	±2200
V7W-4812D12	18-72	20	294	±12.0	±500	85	±470
V7W-4815D12	18-72	20	294	±15.0	±400	85	±330

NOTE

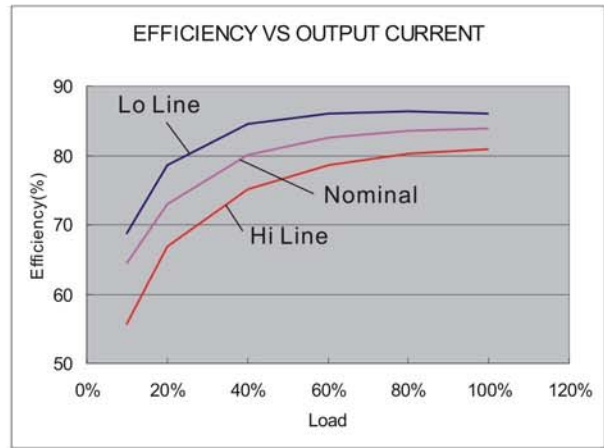
1. Maximum value at nominal input voltage and full load.
2. Typical value at nominal input voltage and full load.
3. Test by normal input voltage and constant resistor load.
4. Ripple/Noise measured over a 20MHz bandwidth.
5. Operation under no-load conditions will not damage these devices, however they may not meet all listed specifications.

The models listed above is just for standard type. If you need the special specification product, please contact our service member by telephone presented in shortform cover or e-mail

V7W - 12W 4:1 Regulated Single & Dual output

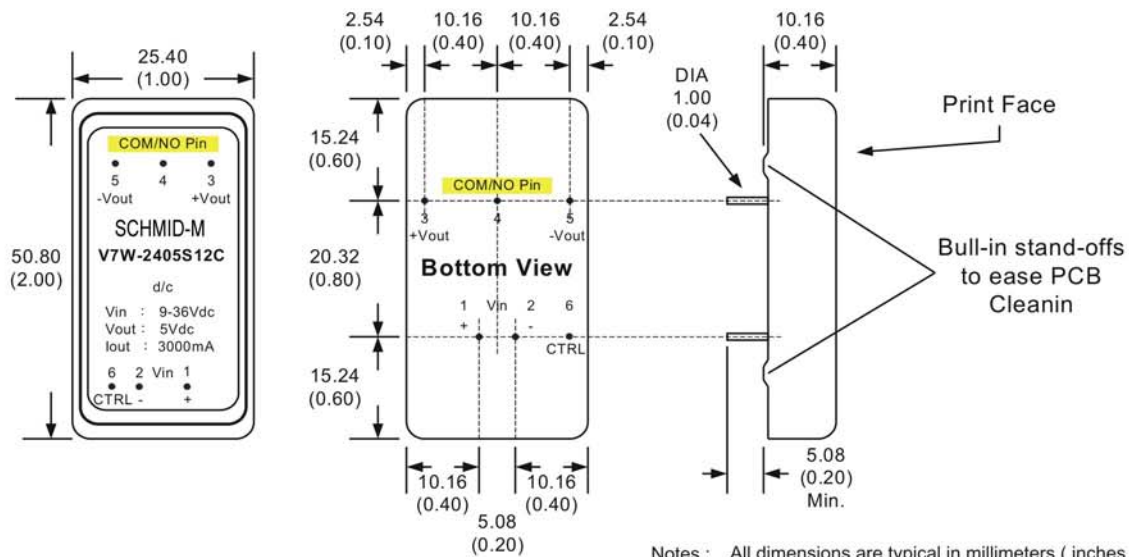


24 Models



48 Models

MECHANICAL SPECIFICATIONS



Last Update : Jan.15.2007