

L-Series

1.5 - 3W Isolated DC/DC-Converters

- Wide 4:1 Input Range
- Full SMD Technology
- 1.5 kVDC or 3.5kVDC Isolation
- Regulated 24 Pin DIP Package
- Single and Dual Output
- Continuous Short Circuit Protection

Selection Guide (See Model Code Information on Page 54)

Ordering Code	Nominal Input Voltage (VDC)	Input Current		Output Voltage (VDC)	Output Current (mA)	Efficiency at Full Load (%)
		No Load (mA)	Full Load (mA)			

1.5W, 1kVDC, Single Output

L1.5-243.3(H)S-(M)	9 - 36	6	73	3.3	400	75
L1.5-2405S(H)-(M)	9 - 36	6	82	5	300	76
L1.5-2412S(H)-(M)	9 - 36	6	80	12	125	78
L1.5-4805S(H)-(M)	18 - 72	5	42	5	125	75
L1.5-4812S(H)-(M)	18 - 72	5	40	12	125	78
L1.5-4815S(H)-(M)	18 - 72	5	39	15	100	81
L1.5-4818S(H)-(M)	18 - 72	5	39	18	84	80

1.5W, 1kVDC, Dual Output

L1.5-243.3D(H)-(M)	9 - 36	6.2	72	±3.3	±200	76
L1.5-2405D(H)-(M)	9 - 36	6.2	81	±5	±150	77
L1.5-4805D(H)-(M)	18 - 72	5.8	41	±5	±150	77
L1.5-4812D(H)-(M)	18 - 72	5.8	40	±12	±63	79
L1.5-4815D(H)-(M)	18 - 72	5.8	40	±15	±50	79

2W, 1kVDC, Single Output

L2-2405S(H)-(M)	9 - 36	5.5	109	5	400	76
L2-2415S(H)-(M)	9 - 36	5.5	104	15	134	80
L2-4805S(H)-(M)	18 - 72	5.8	55	5	400	75
L2-4812S(H)-(M)	18 - 72	5.8	53	12	167	79
L2-4815S(H)-(M)	18 - 72	5.8	52	15	134	80

(* Select on Inquiry Form 3,5 kVDC Isolation ('H' Feature) instead of 1.5 kVDC and Metal Case (Suffix 'M') vs. Plastic Case. See model Code information on page 54.

Continued on next Page.

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Selection Guide (See Model Code Information on Page 54)

Ordering Code	Nominal Input Voltage (VDC)	Input Current		Output Voltage (VDC)	Output Current (mA)	Efficiency at Full Load (%)
		No Load (mA)	Full Load (mA)			

2W, 1kVDC, Dual Output

L2-2405D(H)-(M)	9 - 36	6.7	113	±5	±200	74
L2-2412D(H)-(M)	9 - 36	6.7	119	±12	±83	78
L2-4805D(H)-(M)	18 - 72	6.4	55	±5	±200	76
L2-4812D(H)-(M)	18 - 72	6.4	54	±12	±83	77
L2-4815D(H)-(M)	18 - 72	6.4	53	±15	±67	79

3W, 1kVDC, Single Output

L3-2405S(H)-(M)	9 - 36	5	164	5	600	76
L3-2412S(H)-(M)	9 - 36	5	158	12	250	79
L3-4805S(H)-(M)	18 - 72	4.7	83	5	600	75
L3-4812S(H)-(M)	18 - 72	4.7	80	12	250	78
L3-4815S(H)-(M)	18 - 72	4.7	79	15	200	79

3W, 1kVDC, Dual Output

L3-2405D(H)-(M)	9 - 36	5.6	162	±5	±300	77
L3-2412D(H)-(M)	9 - 36	5.6	158	±12	±125	79
L3-4805D(H)-(M)	18 - 72	5	80	±5	±300	79
L3-4812D(H)-(M)	18 - 72	5	80	±12	±125	79

(* Select on Inquiry Form 3,5 kVDC Isolation ('H' Feature) instead of 1.5 kVDC and Metal Case (Suffix 'M') vs. Plastic Case. See model Code information on page 54.

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1.5 - 3W Isolated DC/DC-Converters

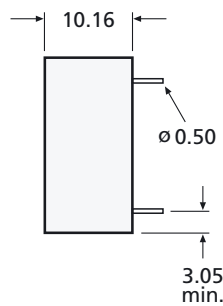
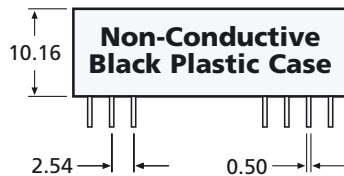
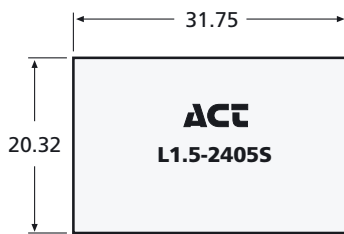
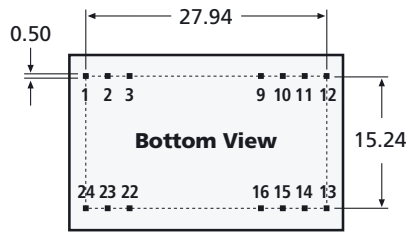
Specifications – Typical at +25°C, Unless Otherwise Noted

Voltage Range	24Vtypes 48Vtypes	9-36 VDC 18-72 VDC	Temperature Coefficient	±0.02% / °C
Filter		π (Pi) Network	Efficiency	75% to 85%
Rated Voltage		1500 VDC, Standard 3500 VDC, Feature "H"	Switching Frequency	250 KHz, typ.
Leakage Current		1 mA	Operating Temperature (Ambient)	-40°C to +85°C
Resistance		10 ⁹ Ω	Storage Temperature	-55°C to +125°C
Capacitance		80 pF, typ.	Derating	None Required
Voltage Accuracy		±1%, max.	Humidity	Up to 90%, Non-condensing
Voltage Balance (Dual Outputs)		±1%	Cooling	Free-air Convection
Ripple and Noise (at 20 MHz BW)		60 mVp-p, max.	Dimensions	31.75 x 20.32 x 10.16 mm 1.25 x 0.80 x 0.40"
Short Circuit Protection		Continuous	Weight	Black Plastic 21.0 g Metal 18.5 g
Short Circuit Restart		Automatic	Case Material	Non-conductive Black Plastic Nickel-Coated Copper = Suffix 'M'
Line Voltage Regulation		±0.5%, max.		
Load Voltage Regulation		±0.5%, max.		

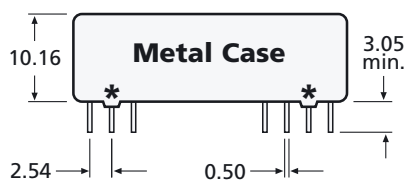
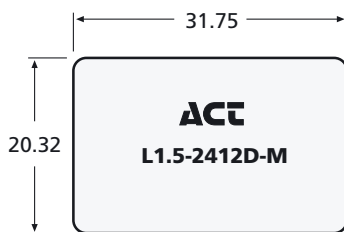
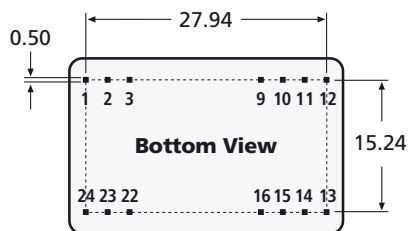
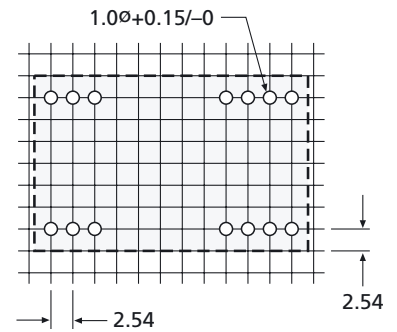
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DIP24 Package Style and Pinning (mm)



Recommended Footprint Details



* Built-in stand-offs to ease PCB cleaning

Pin Connections

Pin #	1kVDC Standard		3.5kVDC	
	Single	Dual	Single	Dual
1	+Vin	+Vin	Omitted	Omitted
2	NC	-Vout	-Vin	-Vin
3	NC	Common	-Vin	-Vin
9	Omitted	Omitted	NC	Common
10	-Vout	Common	Omitted	Omitted
11	+Vout	+Vout	NC	-Vout
12	-Vin	-Vin	Omitted	Omitted
13	-Vin	-Vin	Omitted	Omitted
14	+Vout	+Vout	+Vout	+Vout
15	-Vout	Common	Omitted	Omitted
16	Omitted	Omitted	-Vout	Common
22	NC	Common	+Vin	+Vin
23	NC	-Vout	+Vin	+Vin
24	+Vin	+Vin	Omitted	Omitted

Tolerance:
x.xx = $\pm 0.25\text{mm}$

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1.5 - 3W Isolated DC/DC-Converters

Model Code Information

		L * - * * * (H) - (M)			
Series					
L1.5	=	1.5W			
L2	=	2W			
L3	=	3W			
Input Voltages					
Single and Dual Models					
24	=	9-36VDC			
48	=	18-72VDC			
Output Voltages					
Single Models					
3.3	=	3.3VDC			
05	=	5VDC			
12	=	12VDC			
15	=	15VDC			
18	=	18VDC			
Dual Models					
3.3	=	±3.3VDC			
05	=	±5VDC			
12	=	±12VDC			
15	=	±15VDC			
				Suffix	
				Blank	= Plastic case
				'M' Suffix	= Metal Case
				Isolation	
				Blank	= 1.5kVDC
				'H' Feature	= 3.5kVDC
				Output	
				S	= Single
				D	= Dual

Ordering Examples: For availability see Selection Guides on pages 49 and 50

L2-053.3DH-M = L-series 2 watt , 9-36VDC input, ±3.3VDC output, dual output, 3.5kVDC isolation, metal case