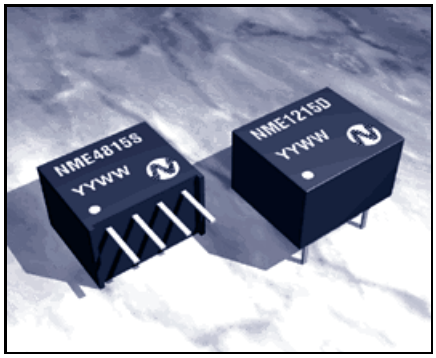
C&D TECHNOLOGIES
Power Solutions

NME 24V & 48V SERIES

Isolated 1W Single Output DC-DC Converters



FEATURES

- Single Isolated Output
- Industry Standard Pinout
- 1kVDC Isolation
- Efficiency to 80%
- Power Density 1.45W/cm^3
- 24V & 48V Input
- 5V, 9V, 12V and 15V Output
- Footprint from 0.69cm^2
- UL 94V-0 Package Material
- No Heatsink Required
- Internal SMD Construction
- Toroidal Magnetics
- Fully Encapsulated
- No External Components Required
- Custom Solutions Available
- Pin Compatible with LME
- SIP & DIP Package Styles

DESCRIPTION

The NME Series of DC-DC Converters is particularly suited to isolating and/or converting DC power rails. The galvanic isolation allows the device to be configured to provide an isolated negative rail in systems where only positive rails exist.

SELECTION GUIDE

Order Code	Nominal Input Voltage (V)	Output Voltage (V)	Output Current (mA)	Efficiency (%)	Isolation Capacitance (pF)	MTTF[1] kHrs	Package Style
NME2405D	24	5	200	70	40	201	DIP
NME2409D	24	9	111	75	59	185	
NME2412D	24	12	83	80	78	163	
NME2415D	24	15	66	80	79	136	
NME2405S	24	5	200	70	40	201	SIP
NME2409S	24	9	111	75	59	185	
NME2412S	24	12	83	80	78	163	
NME2415S	24	15	66	80	79	136	
NME4805D	48	5	200	70	32	213	DIP
NME4809D	48	9	111	75	50	194	
NME4812D	48	12	83	80	76	164	
NME4815D	48	15	66	80	75	140	
NME4805S	48	5	200	70	32	213	SIP
NME4809S	48	9	111	75	50	194	
NME4812S	48	12	83	80	76	164	
NME4815S	48	15	66	80	75	140	

When operated **with** additional external load capacitance the rise time of the input voltage will determine the maximum external capacitance value for guaranteed start up. The slower the rise time of the input voltage the greater the maximum value of the additional external capacitance for reliable start up.

INPUT CHARACTERISTICS

Parameter	Conditions	MIN	TYP	MAX	Units
Voltage Range	Continuous operation, 24V input types	21.6	24	26.4	V
	Continuous operation, 48V input types	43.2	48	52.8	

OUTPUT CHARACTERISTICS

Parameter	Conditions	MIN	TYP	MAX	Units
Rated Power[2]	T_A= 0°C to 70°C			1	W
Voltage Set Point Accuracy	See tolerance envelope				
Line Regulation	High V_{IN} to low V_{IN}			1.2	%/%
Load Regulation	10% load to rated load, 5V output types			15	%
	10% load to rated load, all other output types			10	
Ripple & Noise	BW=DC to 20MHz, all input types			150	mV p-p

ABSOLUTE MAXIMUM RATINGS

Short-circuit duration[3]	1 second
Lead temperature 1.5mm from case for 10 seconds	300°C
Input voltage V_{IN}, NME24 types	28V
Input voltage V_{IN}, NME48 types	54V

1 Calculated using MIL-HDBK-217F with nominal input voltage at full load.
2 See derating curve
3 Supply voltage must be discontinued at the end of the short circuit duration.
All specifications typical at T_A=25°C, nominal input voltage and rated output current unless otherwise specified.

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ISOLATION CHARACTERISTICS

Parameter	Conditions	MIN	TYP	MAX	Units
Isolation Test Voltage	Flash tested for 1 second	1000			VDC
Resistance	Viso=500VDC	1			GΩ

GENERAL CHARACTERISTICS

Parameter	Conditions	MIN	TYP	MAX	Units
Switching Frequency	All input types		100		kHz

TEMPERATURE CHARACTERISTICS

Parameter	Conditions	MIN	TYP	MAX	Units
Specification	All output types	0		70	°C
Storage		-55		150	°C
Cooling	Free air convection				

PIN CONNECTIONS

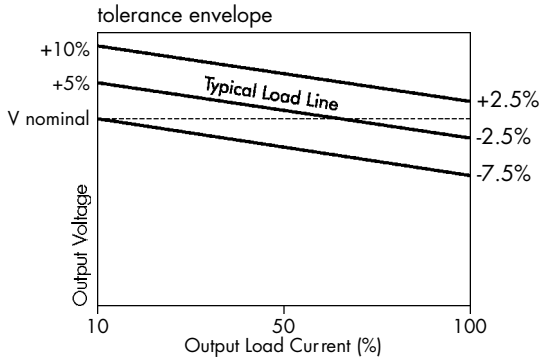
8 Pin DIP

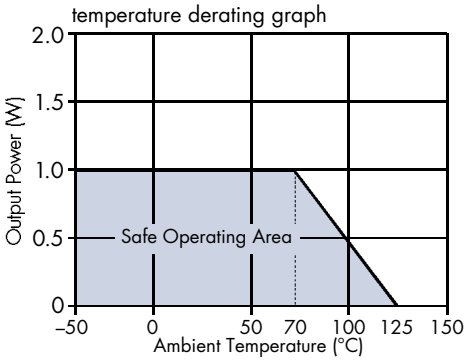
PIN	
1	GND
4	VIN
5	+V
7	0V

4 Pin SIP

PIN	
1	GND
2	VIN
3	0V
4	+V

PERFORMANCE CHARACTERISTICS

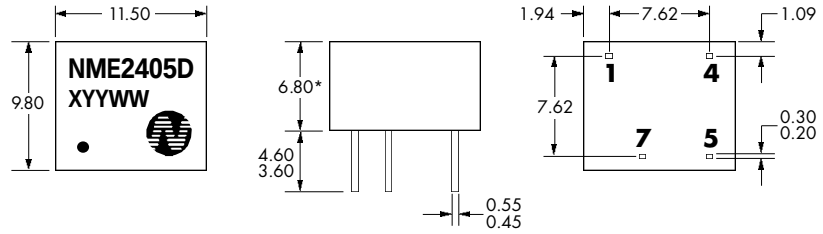




MECHANICAL DIMENSIONS

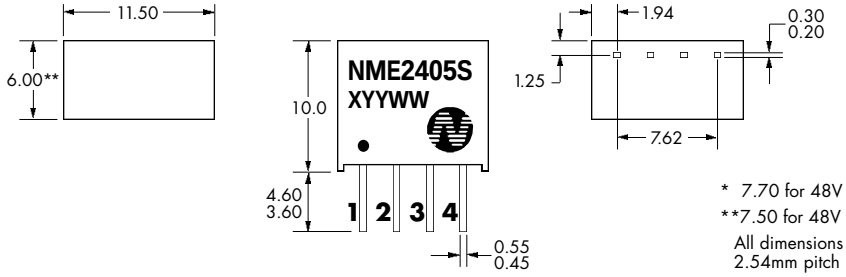
8 Pin DIP

Weight: 1.48g



4 Pin SIP

Weight: 1.30g



* 7.70 for 48V variants

**7.50 for 48V variants

All dimensions in mm XX.XX ±0.25mm. All pins on a 2.54mm pitch and within ±0.25mm of true position.

Instructions for use are available from www.dc-dc.com

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