

features

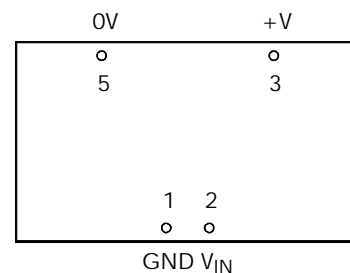
- Industry Standard Pinout
- Pin Compatible with NMXU
- Output Regulation 0.5%
- 1kVDC Isolation
- Single or Dual Output
- Short Circuit Protected
- Low Profile Package
- Efficiency to 75%
- Power Density 0.53W/cm³
- 5V & 12V input
- 5V, 12V and 15V Output
- Footprint 9.52cm²
- UL 94V-0 Package Material
- No Heatsink Required
- Internal SMD Construction
- Toroidal Magnetics
- Fully Encapsulated
- MTTF up to 1.0 Million Hours
- Custom Solutions Available

description

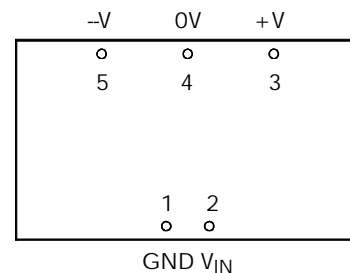
The NMXSO series offers a regulated 5W output in a low profile industry-standard package. When upgrading to the NMXSO from 2" square parts, it is possible to use the additional 16.28cm² to add additional circuitry or reduce the overall board size. The device is protected against short-term short circuits. The regulation is ideal for stabilising supply voltages which vary due to loading, eg on backplanes in distributed power systems.

pin connections

Single Output Type (top view)



Dual Output Type (top view)



NMXSO SERIES

Isolated 5W Regulated Single and Dual Output

absolute maximum ratings over operating free air* temperature range

Input voltage V_{IN} NMX05 types	7V
Input voltage V_{IN} NMX12 types	15V
Output power 5V output types	5W
Output power 12V output types	5.6W
Output power 15V output types	6W
Isolation voltage (flash tested for 1 second)	1000VDC
Operating free air temperature range	0°C to 70°C
Storage temperature range	-55°C to 100°C
Lead temperature 1.5mm from case for 10 seconds.	300°C
Short circuit protection	15 seconds max.

electrical specifications

(measured at $T_A=25^{\circ}\text{C}$, at nominal input voltage)

Input voltage range NMX05 types	5V \pm 10%
Input voltage range NMX12 types	12V \pm 10%
Load voltage regulation (10% to 100% full load)	0.5%
Line voltage regulation (10% to 100% full load)	\pm 0.5%
Output voltage accuracy	\pm 3%
Input reflected ripple (20MHz Band Limited)	150mV p-p max.
Output ripple (20 MHz Band limited)	150mV p-p max.
Insulation resistance at 1000VDC	1000M Ω min.
Efficiency at full load	65% typical 55% min.
Temperature drift (V_{OUT})	0.015% per $^{\circ}\text{C}$ max.
Temperature rise above ambient at full load	30°C max.
Weight (typical)	20 grams
Switching frequency at full load (typical)	70kHz
No load power consumption (typical)	700mW

* Free air – requires a minimum of 10mm air space around the component.

selection guide

single output types - 5V and 12V input types

Part Number	Output Voltage (V)	Output Current Each Output (mA)	Package Style
NMXSXX05SO	5	1000	1
NMXSXX12SO	12	470	
NMXSXX15SO	15	400	

dual output types - 5V and 12V input types

Part Number	Output Voltage (V)	Output Current Each Output (mA)	Package Style
NMXDXX05SO	±5	500	2
NMXDXX12SO	±12	235	
NMXDXX15SO	±15	200	

typical isolation capacitance (pF)

Part Number	Output Voltage (V)		
	05	12	15
NMXD05XXSO	30.5	37.7	36.6
NMXD12XXSO	40.5	74.8	65.7
NMXS05XXSO	37.4	37.1	33.3
NMXS12XXSO	46.6	55.0	60.0

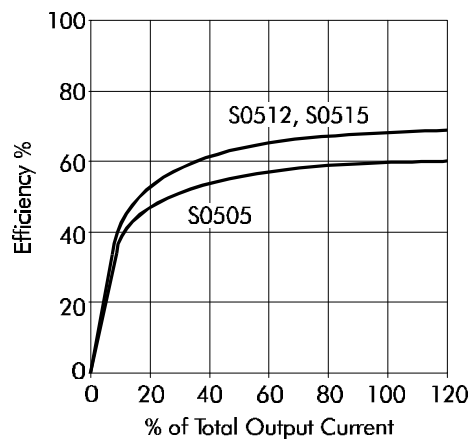
Note : All data taken at T_A = 25°C.

NMXSO SERIES

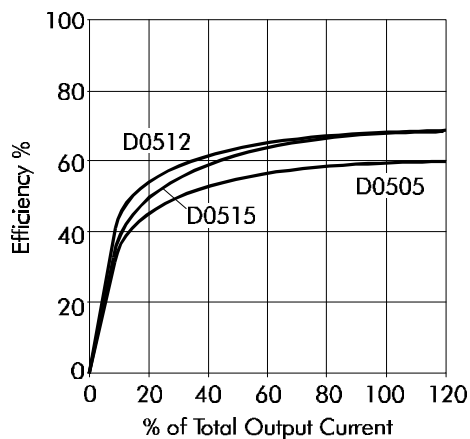
Isolated 5W Regulated Single and Dual Output

typical characteristics

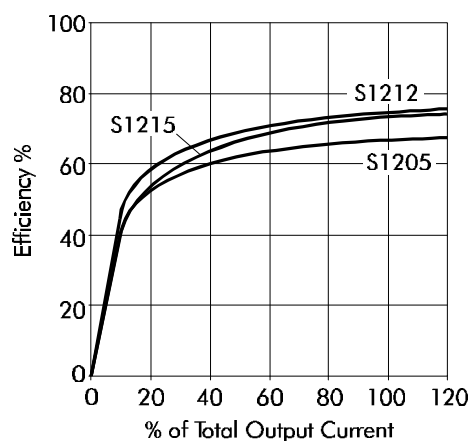
NMXS05 series



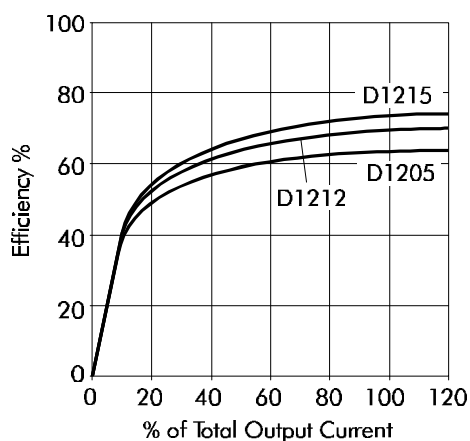
NMXD05 series



NMXS12 series



NMXD12 series



Note : All data taken at $T_A=25^{\circ}\text{C}$.

mean time to failure (MTTF) in thousands of hours

Part Number	-25°C	25°C	70°C
NMXD0505SO	780	565	123
NMXS0505SO	1059	811	225
NMXD0512SO	174	146	73
NMXS0512SO	314	265	137
NMXD0515SO	96	83	51
NMXS0515SO	182	157	98
NMXD1205SO	196	162	76
NMXS1205SO	209	177	106
NMXD1212SO	104	89	53
NMXS1212SO	143	122	81
NMXD1215SO	70	61	41
NMXS1215SO	107	93	66

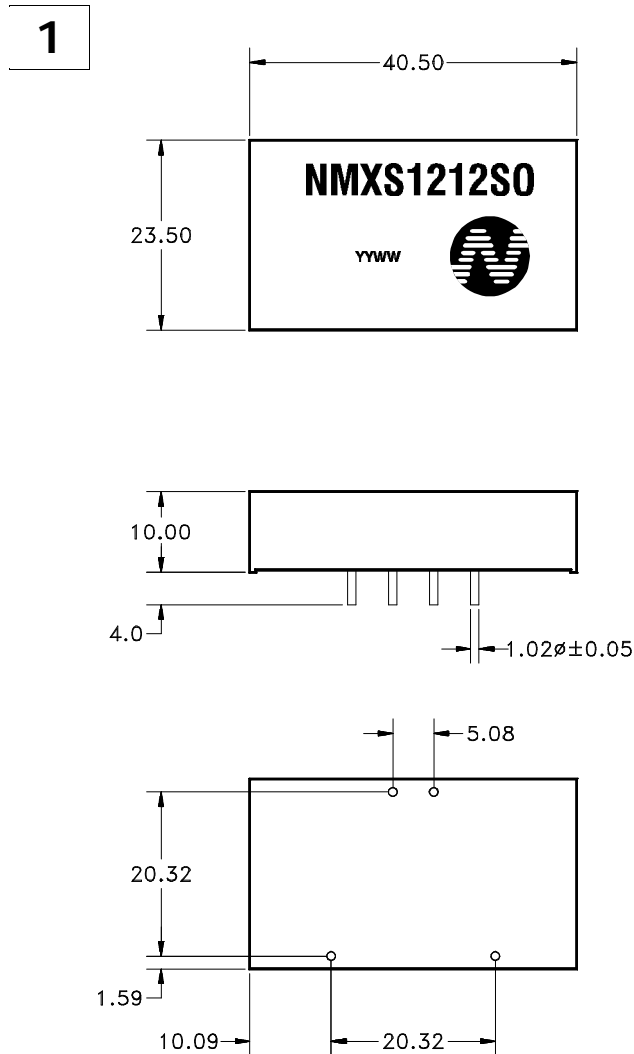
Note : MTTF figures derived from hybrid model of MIL-HDBK-217F.

NMXSO SERIES

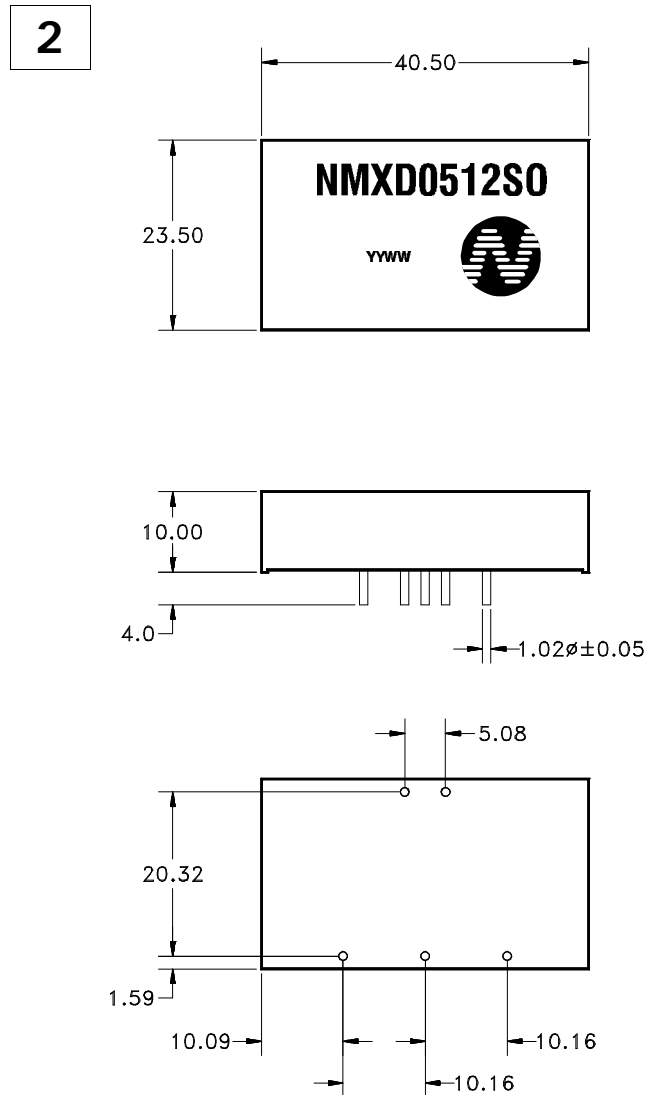
Isolated 5W Regulated Single and Dual Output

outline dimensions

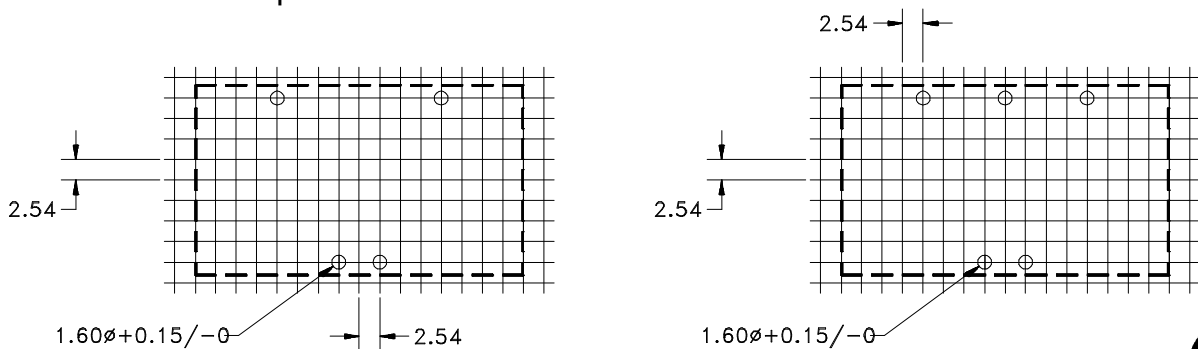
single output types



dual output types



recommended footprint details



All pins on a 2.54mm pitch.

All dimensions in mm XX.X ± 0.50, XX.XX ± 0.25

