



FEATURES

- ◆ 1kVDC Isolation
- ◆ Internal SMD Construction
- ◆ UL94V-0 Package Material
- ◆ Toroidal Magnetics
- ◆ Efficiency to 85%

MODEL SELECTION

2A^①05^②05^③N^④X^⑤T^⑥

- ① Product Series
- ② Input Voltage
- ③ Output Voltage
- ④ No Pin
- ⑤ Fixed Input
- ⑥ SMD Package

APPLICATIONS

Compared to standard 2 Watt packages, space savings of 80% respectively 77% are achieved by these 2A-NXT&2B-NXT SMD Miniature DC/DC Converters. They have been specifically designed for applications where board space is at a premium, since these 2 Watt converters have only a slightly larger foot print than conventional 1 Watt converters. At efficiencies up to 80%, external cooling is not needed, as the full output power is available over the operating temperature range -40°C to +85°C. All converters have an I/O-Isolation of 1kVDC, allowing making them suitable for many applications.



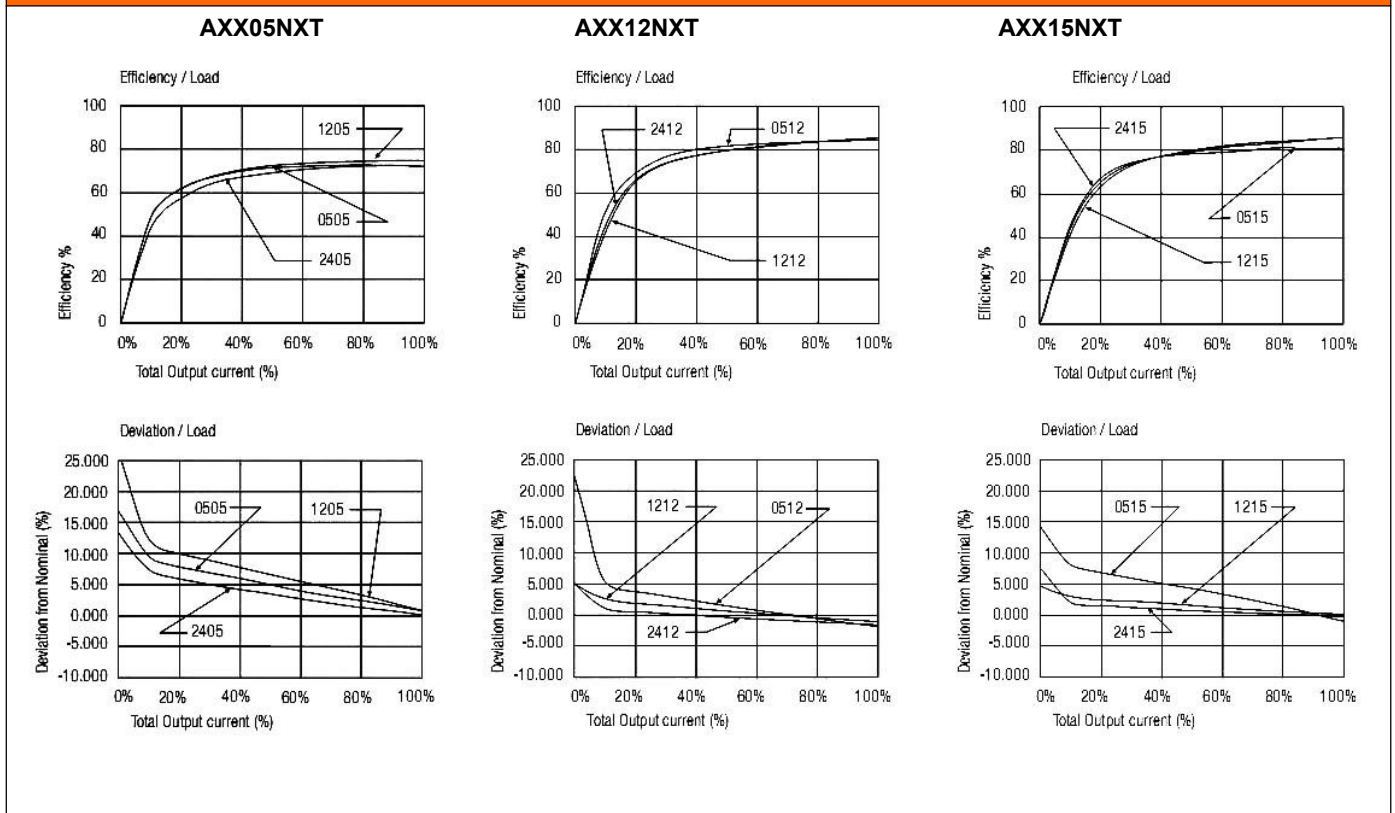
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SELECTION GUIDE

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
2B0503NXT	5	3.3	606	70-75
2B0903NXT	9	3.3	606	70-75
2B1203NXT	12	3.3	606	70-75
2B1503NXT	15	3.3	606	70-75
2B2403NXT	24	3.3	606	70-75
2B0505NXT	5	5	400	80-85
2B0905NXT	9	5	400	80-85
2B1205NXT	12	5	400	80-85
2B1505NXT	15	5	400	80-85
2B2405NXT	24	5	400	80-85
2B0509NXT	5	9	222	80-85
2B0909NXT	9	9	222	80-85
2B1209NXT	12	9	222	80-85
2B1509NXT	15	9	222	80-85
2B2409NXT	24	9	222	80-85
2B0512NXT	5	12	167	80-85
2B0912NXT	9	12	167	80-85
2B1212NXT	12	12	167	80-85
2B1512NXT	15	12	167	80-85
2B2412NXT	24	12	167	80-85
2B0515NXT	5	15	133	80-85
2B0915NXT	9	15	133	80-85
2B1215NXT	12	15	133	80-85
2B1515NXT	15	15	133	80-85
2B2415NXT	24	15	133	80-85
2B0524NXT	5	24	83	80-85
2B0924NXT	9	24	83	80-85
2B1224NXT	12	24	83	80-85
2B1524NXT	15	24	83	80-85
2B2424NXT	24	24	83	80-85
2A0505NXT	5	±5	±200	70-75
2A0905NXT	9	±5	±200	70-75
2A1205NXT	12	±5	±200	70-75
2A1505NXT	15	±5	±200	70-75
2A2405NXT	24	±5	±200	70-75
2A0509NXT	5	±9	±111	75-78
2A0909NXT	9	±9	±111	75-78
2A1209NXT	12	±9	±111	75-78
2A1509NXT	15	±9	±111	75-78
2A2409NXT	24	±9	±111	75-78
2A0512NXT	5	±12	±83	75-83
2A0912NXT	9	±12	±83	75-83
2A1212NXT	12	±12	±83	75-83
2A1512NXT	15	±12	±83	75-83
2A2412NXT	24	±12	±83	75-83
2A0515NXT	5	±15	±66	75-85
2A0915NXT	9	±15	±66	75-85
2A1215NXT	12	±15	±66	75-85
2A1515NXT	15	±15	±66	75-85
2A2415NXT	24	±15	±66	75-85
2A0524NXT	5	±24	±42	78-85
2A0924NXT	9	±24	±42	78-85
2A1224NXT	12	±24	±42	78-85
2A1524NXT	15	±24	±42	78-85
2A2424NXT	24	±24	±42	78-85

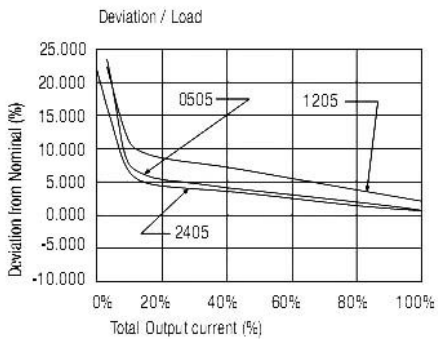
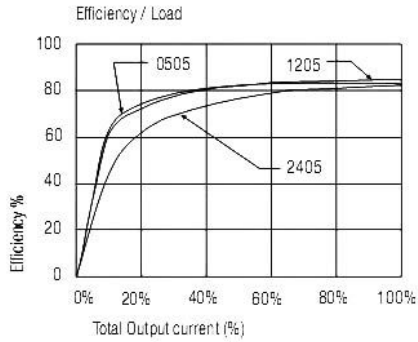
Specifications (Core Operating Area)		
Input Voltage Range		±10
Output Voltage Accuracy		±5
Line Voltage Regulation		1.2%/1% of Vin max.
Load Voltage Regulation (10% to 100% full load)	3.3V output types 5V output type 9V, 12V, 15V, 24V output types	20% max. 15% max. 10% max.
Output Ripple and Noise (20MHz limited)		150mVp-p max.
Operating Frequency		20kHz min. / 50kHz typ. / 85kHz max.
Efficiency at Full Load		70% min. / 80% typ.
No Load Power Consumption	B-NXT typ. A-NXT typ.	124mW min. / 186mW typ. / 250mW max. 159mW min. / 192mW typ. / 240mW max.
Isolation Voltage	(tested for 1 second)	1000VDC min.
Rated Working Voltage	(long term isolation)	see Application Notes
Isolation Capacitance		40pF min. / 115pF max.
Isolation Resistance		10 GΩ min.
Short Circuit Protection		1 Second
Operating Temperature Range (free air convection)		-40°C to +85°C (see Graph)
Storage Temperature Range		-55°C to +125°C
Reflow Temperature ROHS compliant (for more details see Application Notes)		245°C (30 sec) max.
Relative Humidity	MSL Level 1	95% RH
Package Weight	B-NXT types A-NXT types	2.1g 2.5g
MTBF (+25°C) (+85°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F 886 x 10 ³ hours
		using MIL-HDBK 217F 128 x 10 ³ hours

Typical Characteristics

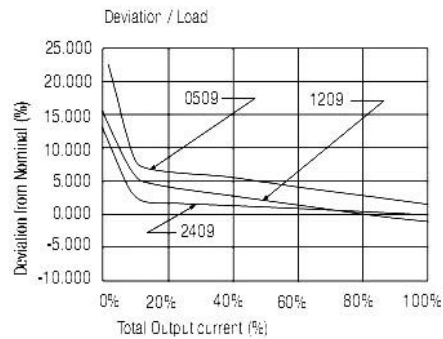
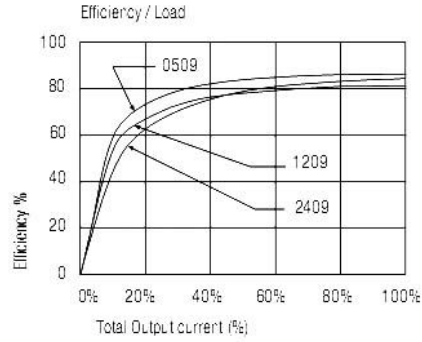


Typical Characteristics

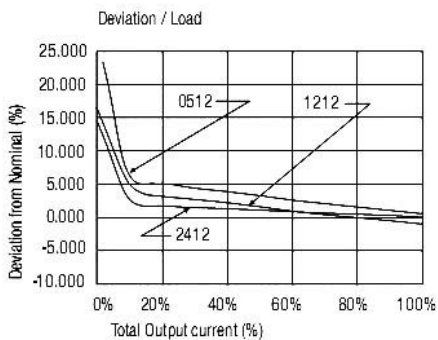
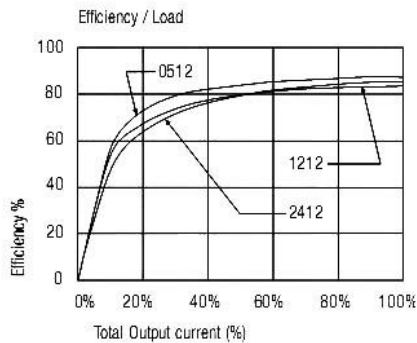
BXX05NXT



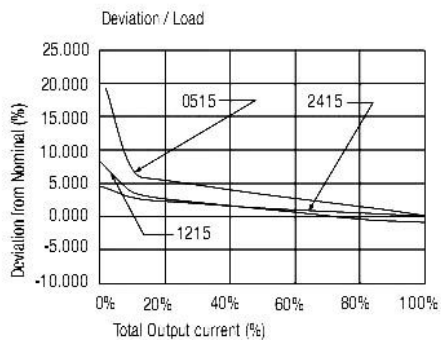
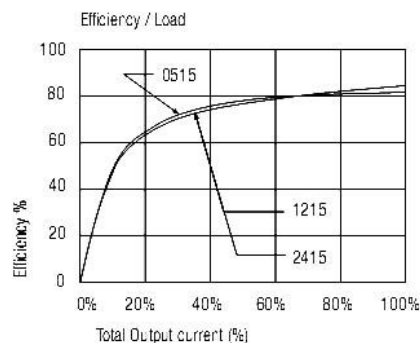
BXX09NXT



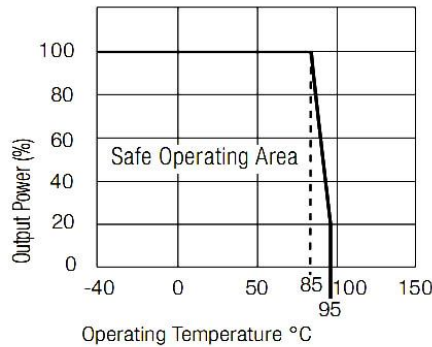
BXX12NXT



BXX15NXT

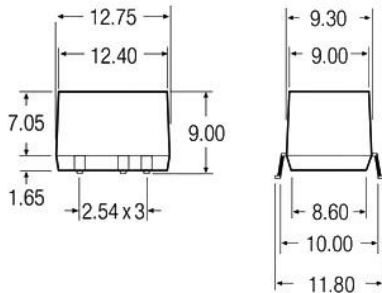


Derating-Graph(Ambient Temperature)

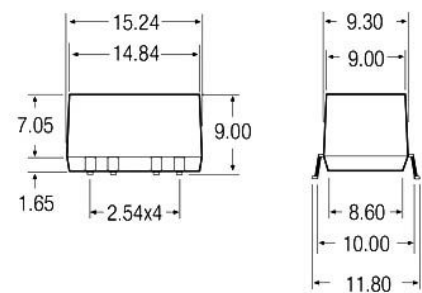


Package Style and Pinning (mm)

8 PIN Single SMD Package



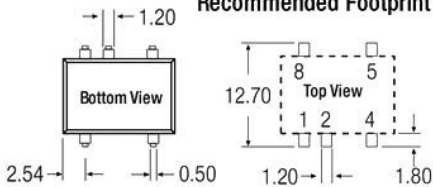
10 PIN Dual SMD Package



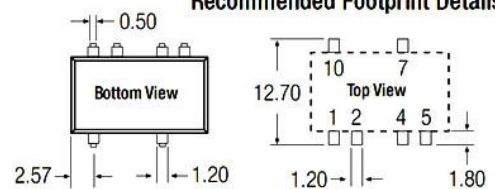
Pin Connections

Pin #	Single	Dual
1	-Vin	-Vin
2	+Vin	+Vin
4	-Vout	Com
5	+Vout	-Vout
7	No Pin	+Vout
8	NC	No Pin
10	No Pin	NC

Recommended Footprint Details



Recommended Footprint Details



NC = No Connection
XX.X ± 0.5 mm
XX.XX ± 0.25 mm



RoHS COMPLIANT INFORMATION

This series is compatible with RoHS soldering systems with a peak wave solder temperature of 300°C for 10 seconds. The pin termination finish on the SIP package type is Tin Plate, Hot Dipped over Matte Tin with Nickel Preplate. The DIP types are Matte Tin over Nickel Preplate. Both types in this series are backward compatible with Sn/Pb soldering systems.



REACH COMPLIANT INFORMATION

This series has proven that this product does not contain harmful chemicals, it also has harmful chemical substances through the registration, inspection and approval.