76250EN, 76253/XXEN

EN Approved Converter Transformers

FEATURES

- Maxim Compatible
- BS EN 60950 Approved
- Isolation to 6kV
- Toroidal Construction
- Industry Standard Pinout
- UL 94V-0 Package Material
- Fully Encapsulated

DESCRIPTION

The 76250EN converter transformer is specifically designed for use with Maxim chipsets to provide isolated RS232 interfaces. A carefully controlled turns ratio ensures consistent performance whilst a toroidal construction minimises EMI.

The 76253/XXEN converter transformers are specifically designed for use with the MAX253 chipset to provide isolated power supplies. The 5V version can supply 1W and the 3.3V version can supply 500mW. A centre tapped secondary winding allows for full bridge, half bride or voltage doubling.

The devices are fully approved to BS EN 60950 for use in telecoms applications.

SELECTION GUIDE

	Input Voltage	Output Voltage	Output Current	Isolation Voltage	Turns Ratio
Order Code	(V)	(V)	(mA Max)	(VDC)	
76250EN	–	–	–	6000	1CT:1
76253/35EN	3.3	5.0	100	6000	1:√5
76253/55EN	5.0	5.0	200	6000	1:1.33

76250EN CHARACTERISTICS

Parameter	Conditions	MIN	TYP	MAX	Units
Primary Inductance, L_P	10kHz, 100mV	1.0	2.0	2.5	mH
Leakage Inductance, L_L	100kHz, 100mV		35	40	µH
Interwinding Capacitance, C_{WW}	100kHz, 100mV		5.0	10	pF
D.C. Resistance, R_{DC}	<0.1VDC		1.0	2.0	Ω
Volt-time Product, E_T	5kHz, 5V	50			Vµs

76253/35EN CHARACTERISTICS

Parameter	Conditions	MIN	TYP	MAX	Units
Primary Inductance, L_P	100kHz, 250mV	53	92	120	µH
Secondary Inductance, L_S	100kHz, 250mV	350	460	600	µH
Leakage Inductance, L_L	100kHz, 250mV		1.5	3.6	µH
Interwinding Capacitance, C_{WW}	100kHz, 250mV		1.80	3.00	pF
D.C. Resistance, R_{DC}	>0.1VDC		0.60	1.00	Ω
Volt-time Product, E_T	5kHz, 5V	20	35		Vµs

76253/55EN CHARACTERISTICS

Parameter	Conditions	MIN	TYP	MAX	Units
Primary Inductance, L_P	100kHz, 250mV	120	205	250	µH
Secondary Inductance, L_S	100kHz, 250mV	280	362	445	µH
Leakage Inductance, L_L	100kHz, 250mV		3.90	5.00	µH
Interwinding Capacitance, C_{WW}	100kHz, 250mV		1.20	3.00	pF
D.C. Resistance, R_{DC}	>0.1VDC		0.90	1.50	Ω
Volt-time Product, E_T	5kHz, 5V	20	23		Vµs

ABSOLUTE MAXIMUM RATINGS

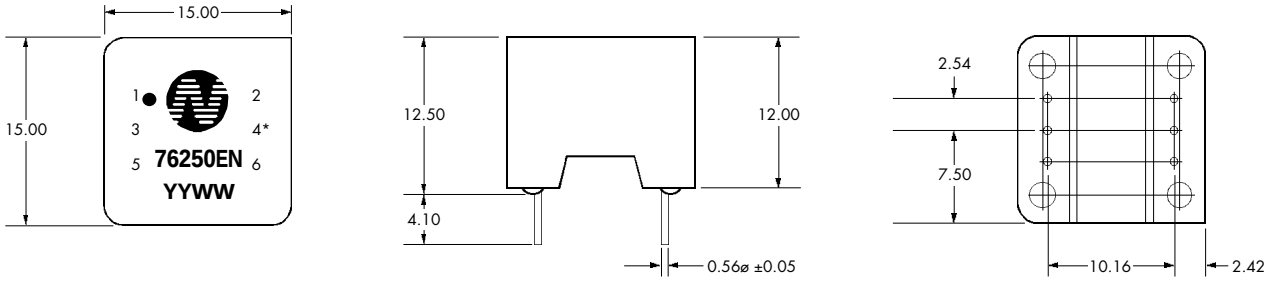
Operating free air temperature range 76250EN	0°C to 70°C
Operating free air temperature range 76253/XXEN	–40°C to 85°C
Storage temperature range	–50°C to 125°C
Lead Temperature 1.5mm from case for 10 seconds	300°C
Peak current I_{PK} 76250EN	300mA
Peak current I_{PK} 76253/XXEN	400mA
Isolation voltage (flash tested for 1 second)	6000VDC

All specifications typical at T_A=25°C.

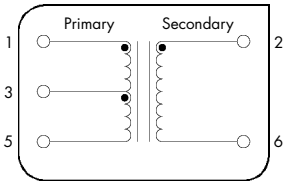
76250EN, 76253/XXEN

EN Approved Converter Transformers

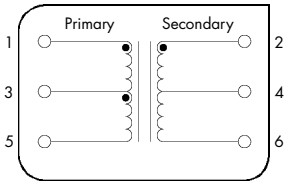
MECHANICAL DIMENSIONS



Pin Connections 76250EN (Top View)



Pin Connections 76253/XXEN (Top View)

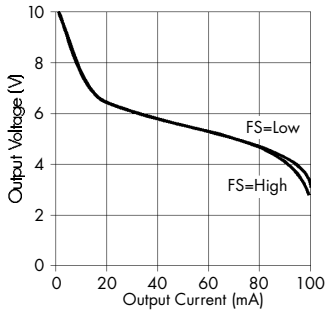


* 76250EN Pin not fitted.
All dimensions in mm XX.XX ±0.25mm. All pins on a 2.54mm pitch and within ±0.25mm of true position.

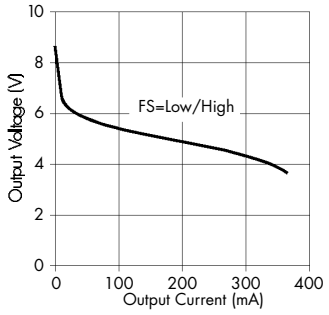
TYPICAL CHARACTERISTICS

VOLTAGE CURVES

76253/35EN

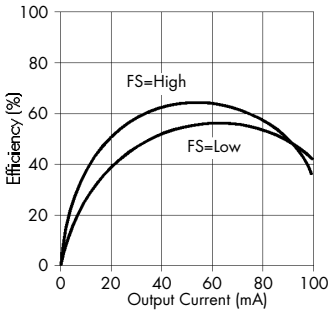


76253/55EN

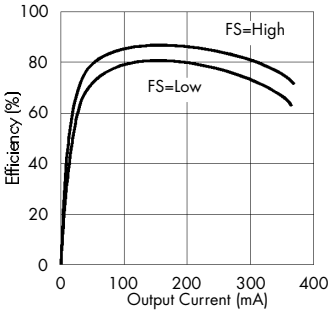


EFFICIENCY CURVES

76253/35EN

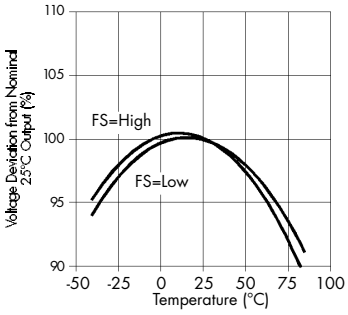


76253/55EN

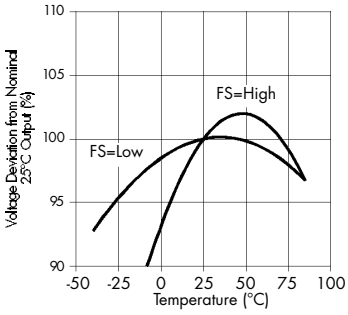


VOLTAGE DEVIATION

76253/35EN



76253/55EN



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

C&D Technologies (NCL) Ltd
Tanners Drive, Blakelands North
Milton Keynes MK14 5BU, England
Tel: +44 (0)1908 615232
Fax:+44 (0)1908 617545
email: info@cdtechno-ncl.com

www: http://www.dc-dc.com

C&D Technologies (NCL), Inc.
8917 Glenwood Avenue, Raleigh
NC 27612, USA
Tel: +1 (919) 571-9405
Fax: +1 (919) 571-9262
email: info@us.cdtechno-ncl.com

C&D TECHNOLOGIES
Power Solutions