

INTEGRATED GIGABIT TRANSFORMER

General Description

NLXF02G3 is a patented device that integrated Transformer and Surge Protection circuit. This innovation design completed Line to Earth and Line to Line surge protection in a single device. It minimizes design effort and components needed for Ethernet application. Its pin out is compatible with traditional Transformer such as Bothhand GST5009, that makes it possible to reserve traditional design without any impact.

Features

- ◆ Gigabit Ethernet application
- ◆ IEC 61000-4-5 10/700us 6KV (CM)
- ◆ IEC 61000-4-5 10/700us 2KV (DM)
- ◆ Small form factor

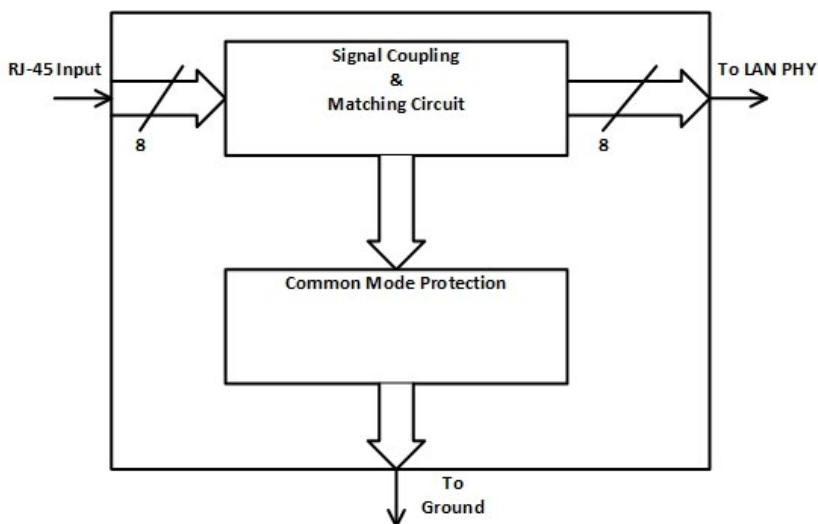


Fig.1 Block Diagram

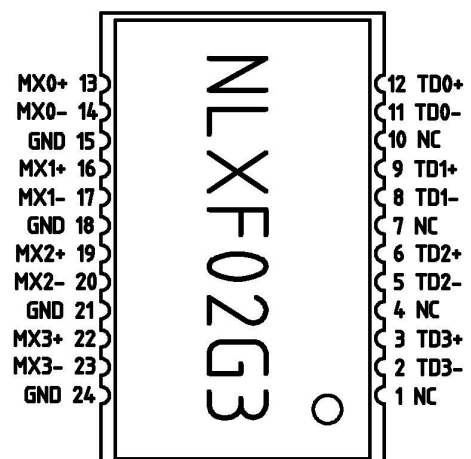


Fig.2 Pin Configuration

DEVICE CHARACTERISTICS

ABSOLUTE MAXIMUM			
Parameter	Symbol	Value	Units
Surge Rating CM (10/700us)	V _{PPC}	6	KV
Surge Rating DM (10/700us)	V _{PPD}	2	KV
Operation Temperature	T _J	0~85	°C
Storage Temperature	T _S	0~85	°C
Soldering Temperature	T _D	260 (10s)	°C

TRANSFER CHARACTERISTICS							
Part Number	Insertion Loss	Return Loss			CMRR		
NLXF02G3	1~100MHz (dB Max)	30MHz (dB Min)	60MHz (dB Min)	100MHz (dB Min)	30MHz (dB Min)	60MHz (dB Min)	100MHz (dB Min)
	-1	-20	-15	-10	-25	-25	-25

ORDERING INFORMATION				
Series Number	Type Code	Data Rate	Model Code	Alternative Code
NLXF	02	G	3	N

TYPICAL APPLICATION

Application Description

NLXF02G3 is designed to work with most PHY chip on the market, except few legacy type which required external pull high. It doesn't need external Bob Smith circuit and PHY side capacitors. While using this part to replace traditional transformer, no need to change layout, just short Bob Smith circuit by 0Ω resistors, and remove PHY side capacitors.

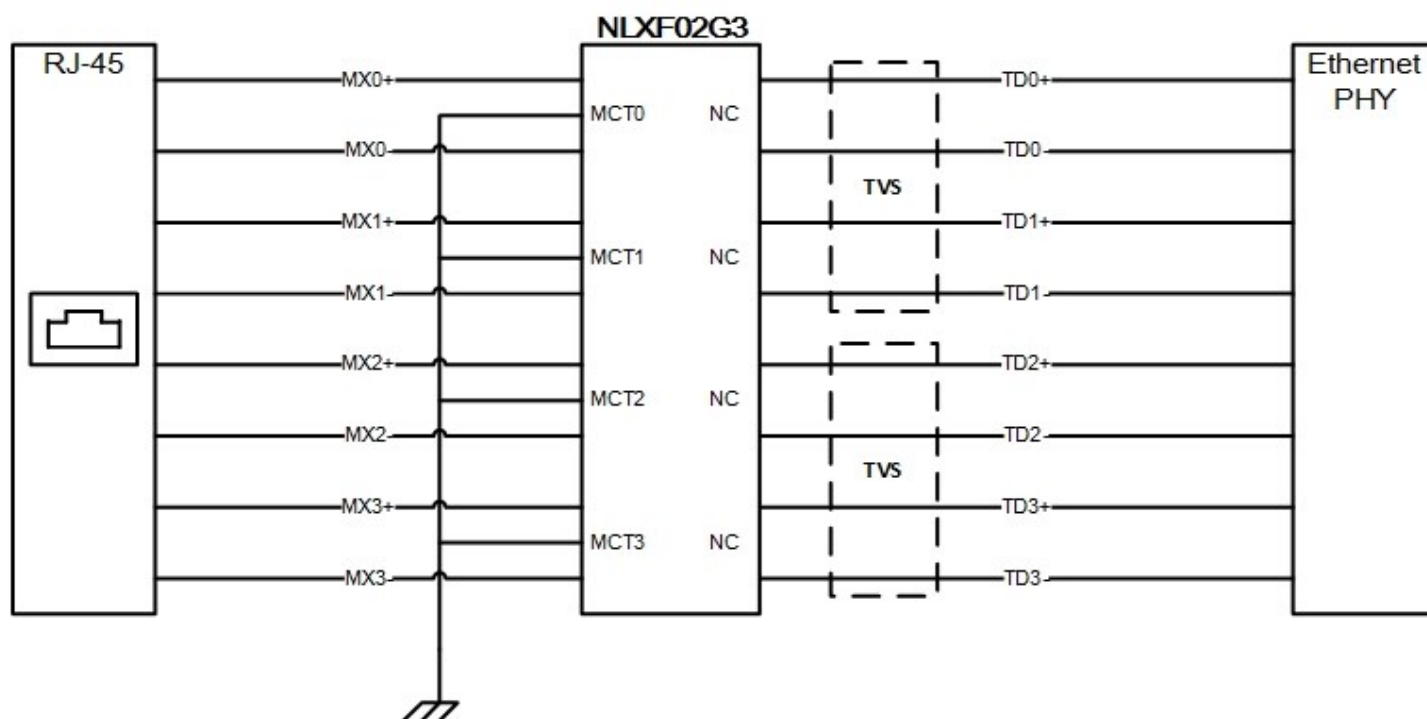
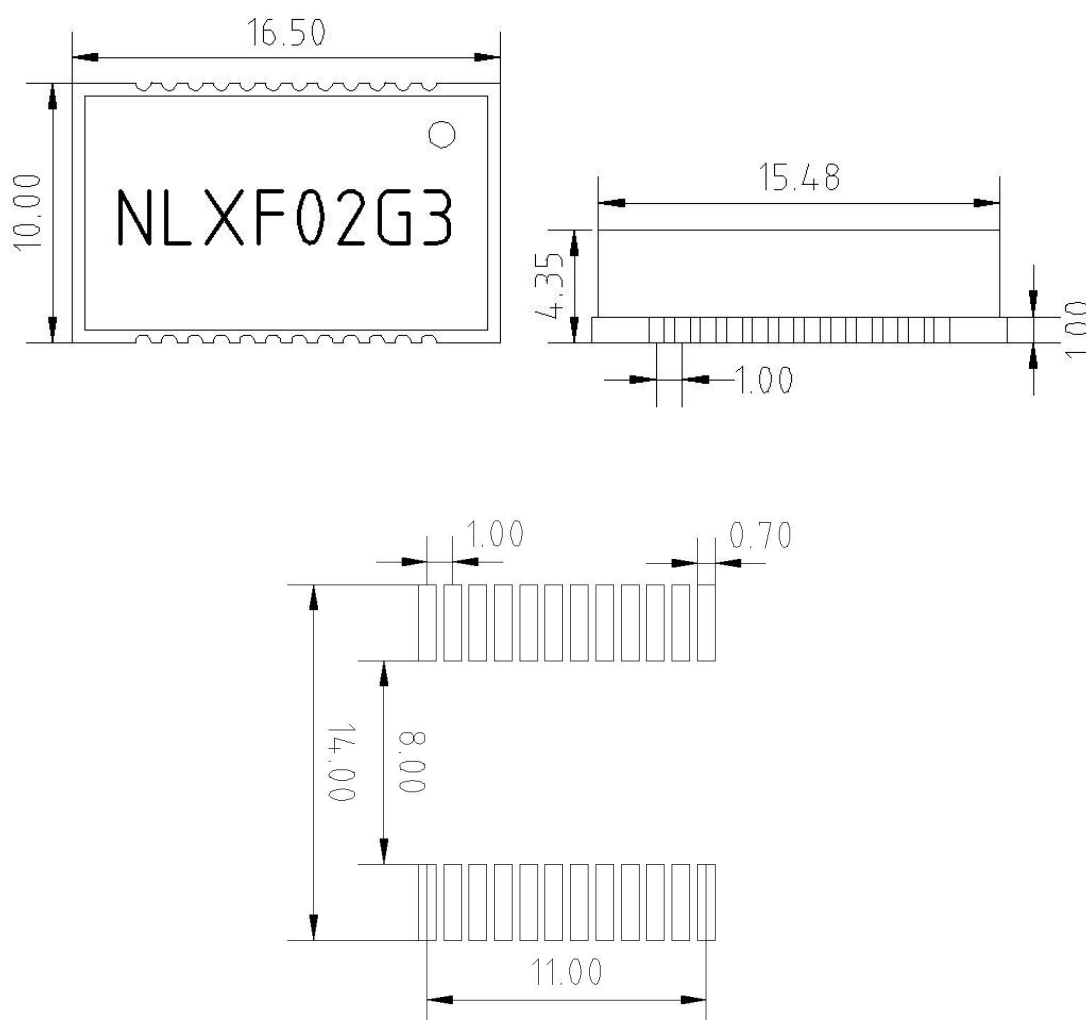


Fig.4 Typical Application

DEVICE OUTLINE

Dimension : ± 0.1 mm



Revision History		Modification Description	
Rev.1.0		Initial Release	
Rev.1.01		Correct Dimension	