

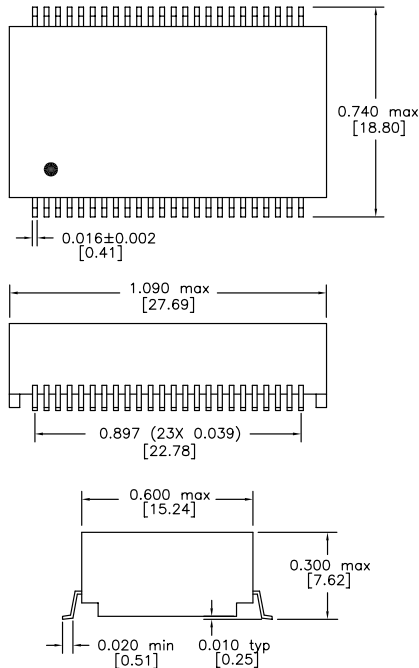
# HALO SMD Dual Port Gigabit Isolation Modules

ELECTRONICS, INC.

HALO Electronics is pleased to present this standard series of high density, dual port, Gigabit Ethernet Isolation Modules. These devices have been designed specifically to address the isolation, insertion loss and return loss requirements of IEEE802.3ab for 10/100/1000BASE-TX applications. Compatible with all leading Phy manufacturers' gigabit IC's. Please refer to the HALO [Gigabit selector guide](#) for more information.

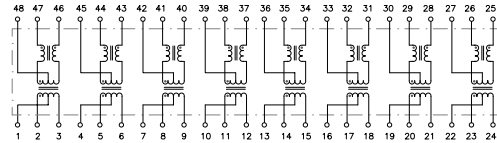


## NV Package

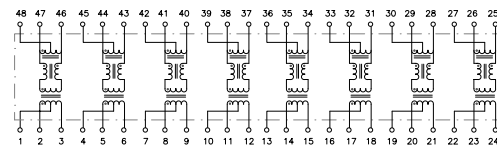


DIMENSIONS: Inch [mm]  
CO-PLANARITY: 0.004 [0.10]

## Schematic A



## Schematic B



### Electrical Specifications @ 25°C

Isolation Voltage: 1,500 Vrms  
 OCL (100KHz, 0.1Vrms, 8mA): 350 μH  
 Turns Ratio: 1CT:1CT  
 Rise Time: 1.75ns  
 CMR (0.1 – 100MHz): -40dB typ.  
 Crosstalk: [33-20log (F/100MHz)]dB typ

### Patented Construction

US Pat Nbrs: 5,656,985 6,297,721 B1  
 6,297,720 B1 6,320,489 B1  
 6,344,785 B1 6,662,431 B1

Part Number	Circuit Schematic	Insertion Loss (1-100MHz)	Return Loss (min)				Temp Range
			1-40MHz	60MHz	80MHz	100MHz	
TG1G-S231NVRL	A	-1.1dB max	-18dB	-14dB	-12dB	-10dB	0 to +70C
TG1G-S232NVRL	B	-1.1dB max	-18dB	-14dB	-12dB	-10dB	0 to +70C
TG1G-E233NVRL	A	-1.1dB max	-18dB	-14dB	-12dB	-10dB	-40 to +85C
TG1G-E234NVRL	B	-1.3dB max	-18dB	-14dB	-12dB	-10dB	-40 to +85C

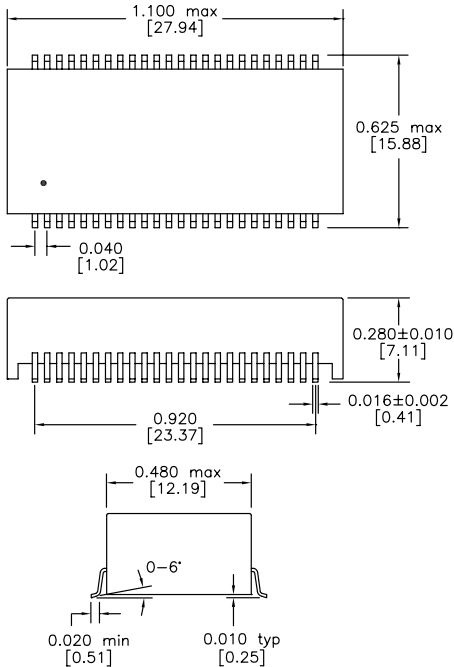
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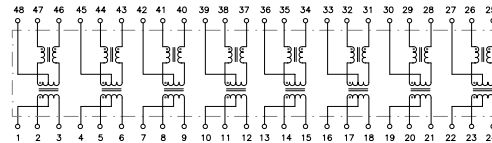


## NV6 Package

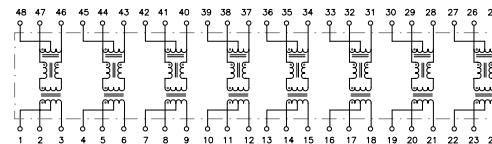


DIMENSIONS: Inch [mm]  
CO-PLANARITY: 0.004 [0.10]

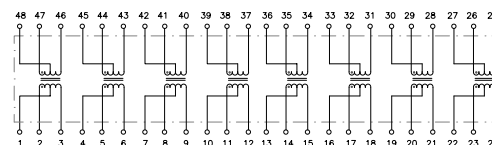
## Schematic A



## Schematic B



## Schematic C



### Electrical Specifications @ 25°C

Isolation Voltage:	1,500 Vrms
OCL (100KHz, 0.1Vrms, 8mA):	350 μH
Turns Ratio:	1CT:1CT
Rise Time:	1.75ns
CMR (0.1 – 100MHz):	-40dB typ. (not applicable to Circuit C)
Crosstalk:	[33-20log (F/100MHz)]dB typ

### Patented Construction

US Pat Nbrs:	5,656,985	6,297,721 B1
	6,297,720 B1	6,320,489 B1
	6,344,785 B1	6,662,431 B1

Part Number	Circuit Schematic	Insertion Loss (1-100MHz)	Return Loss (min)				Temp Range
			1-40MHz	60MHz	80MHz	100MHz	
TG1G-S201NV6RL	A	-1.1dB max	-18dB	-14dB	-12dB	-10dB	0 to +70C
TG1G-S202NV6RL*	B	-1.1dB max	-18dB	-14dB	-12dB	-10dB	0 to +70C
TG1G-S205NV6RL	C	-1.0dB max	-18dB	-14dB	-12dB	-10dB	0 to +70C
TG1G-E201NV6RL	A	-1.1dB max	-18dB	-14dB	-12dB	-10dB	-40 to +85C

\* A cost savings can be realized by using HALO part number TG1G-S232NVRL