

HIGH SPEED LAN MAGNETICS

- Designed for use with AMD 79C872 10/100 Mbps PHY transceiver
- Dual, 2-port and quad, 4-port design options offer best board space, performance and cost per port

efficiency

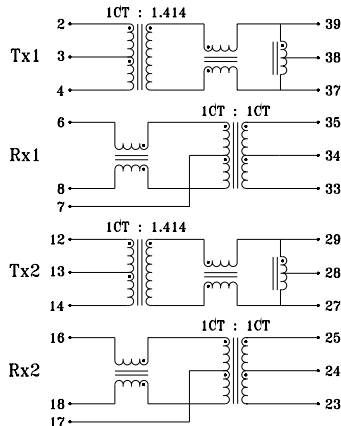
- 40 pin, low profile surface mount package rated to 225°C peak IR reflow temperature
- 2000 Vrms isolation
- 350µH OCL with 8mA DC bias applied

ELECTRICALS AT 25°C

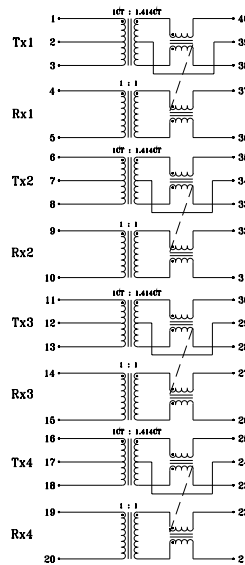
Part No.	Insertion Loss (dB) Typ		Return Loss (dB) Min		Crosstalk (dB) Min	Common to Diff Mode Rej (dB) Min		Common to Common Mode Rej (dB) Min		Schematic
	1MHz-100MHz	1MHz-30MHz	30MHz-60MHz	60MHz-80MHz		30MHz	100MHz	30MHz	100MHz	
S558-5999-72	-1.0	-16	16-20log(f/30MHz)	-10	-35	-50	-40	-40	-30	A
S558-5999-73	-1.0	-16	16-20log(f/30MHz)	-10	-35	-50	-40	-40	-30	B

SCHEMATICS

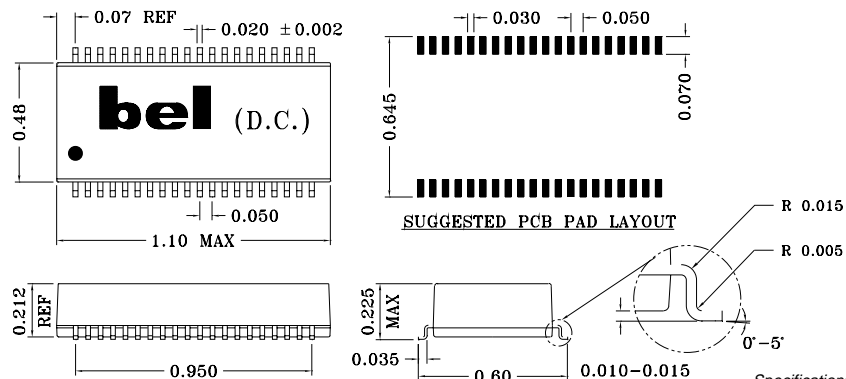
A



B



MECHANICAL

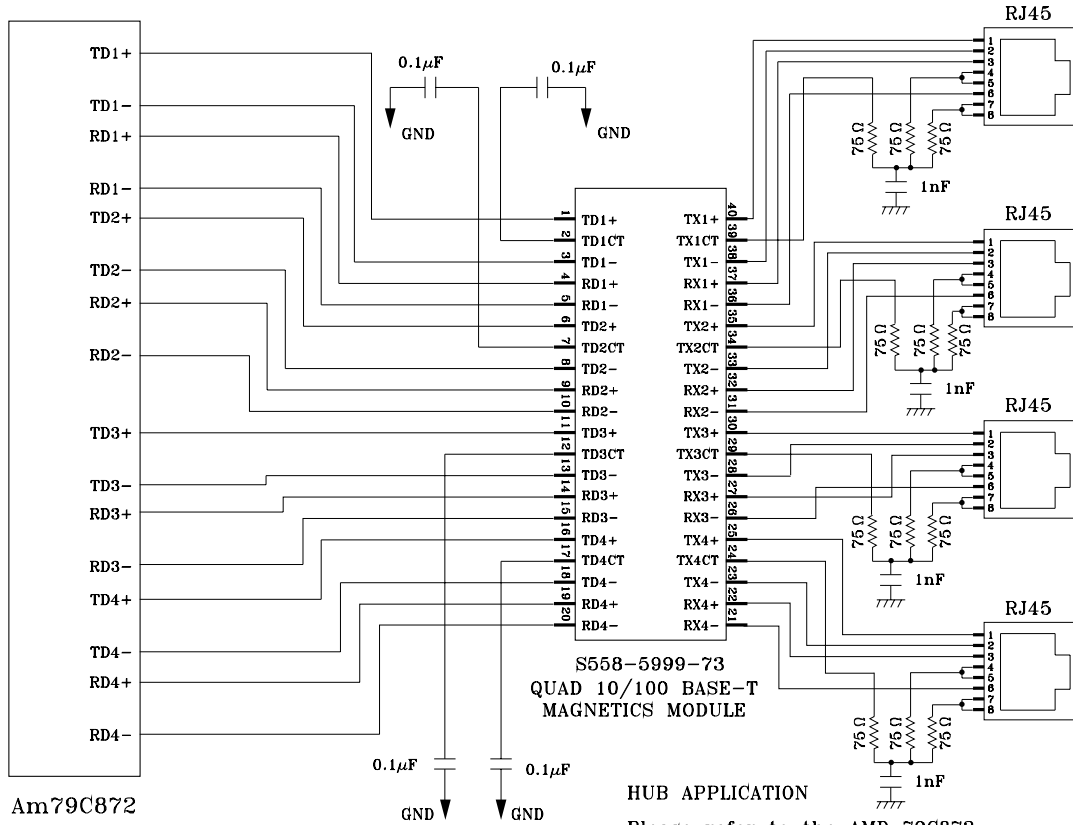


Specifications subject to change without notice.

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960017C

APPLICATION CIRCUIT



APPLICATION NOTES

- Bel has designed these part types for use in either 100 Mbps or 10/100 Mbps multi-port applications with AMD's 79C872 PHY transceiver. These dual, 2-port and quad, 4-port devices provide high isolation transformers, wave shaping, fast rise times, EMI and common mode noise suppression. All part types meet the IEEE 802.3 standards, which includes a requirement for 350µH OCL (inductance) at 8mA DC bias applied.
- The S558-5999-72 includes impedance matching common mode termination on the transmit channel. Good circuit balance on the board layout along with precise selection of the values and tolerances of the discrete external components is critical for proper functionality of this termination. Refer to Bel's application note for proper implementation of the impedance matched common mode termination and possible design considerations to eliminate its use.
- Bel's low profile, surface mount packaging is ideal for high speed pick and place machinery. Parts can be shipped on tape and reel for high speed placement. Construction processes have been implemented for thermal compatibility with high temperature IR reflow assembly processing. Post dipping of leads assist with PC board solderability. Each part is optically inspected to meet rigid coplanarity requirements.

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