HIGH SPEED LAN MAGNETICS

960021A

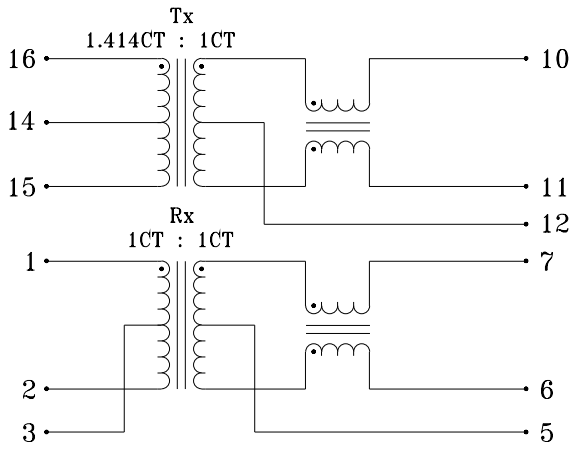
- Tested and qualified for use with Quality Semiconductor's QS6612 10/100Base-TX symbol transceiver chipset
- Low profile, surface mount packaging, rated for 225ºC peak IR reflow temperature
- Dual and quad multi-port magnetics modules available
- 350µH OCL (inductance) with 8mA DC bias applied
- 2000 Vrms isolation

ELECTRICALS AT 25ºC

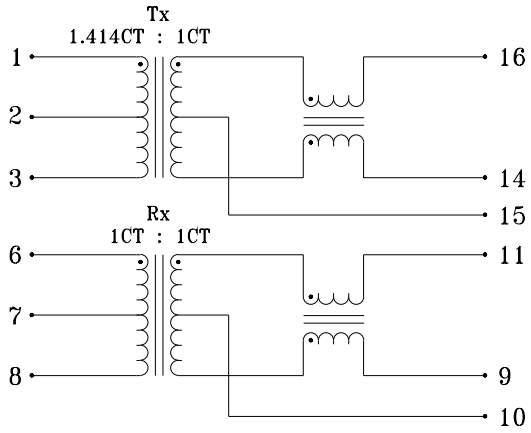
Part No.	Insertion Loss (dB) Typ 1MHz-100MHz	Return Loss (dB) Min 1MHz-30MHz	Return Loss (dB) Min 30MHz-60MHz	Return Loss (dB) Min 60MHz-80MHz	Crosstalk (dB) Min 1MHz-100MHz	Common to Diff Mode Rej (dB) Min 30MHz	Common to Diff Mode Rej (dB) Min 100MHz	Common to Common Mode Rej (dB) Min 30MHz	Common to Common Mode Rej (dB) Min 100MHz	Schematic
S558-5999-50	-1.0	-16	16-20log(f/30MHz)	-10	-35	-50	-30	-50	-30	B
S558-5999-54	-1.0	-16	16-20log(f/30MHz)	-10	-35	-50	-30	-50	-30	A

SCHEMATICS

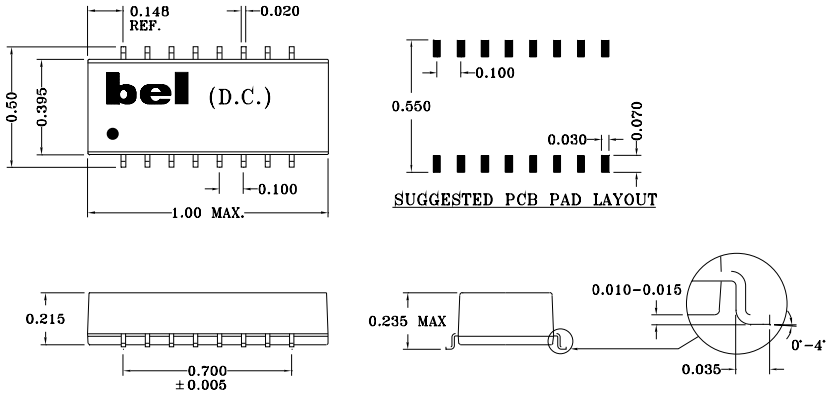
A



B



MECHANICAL



Specifications subject to change without notice.

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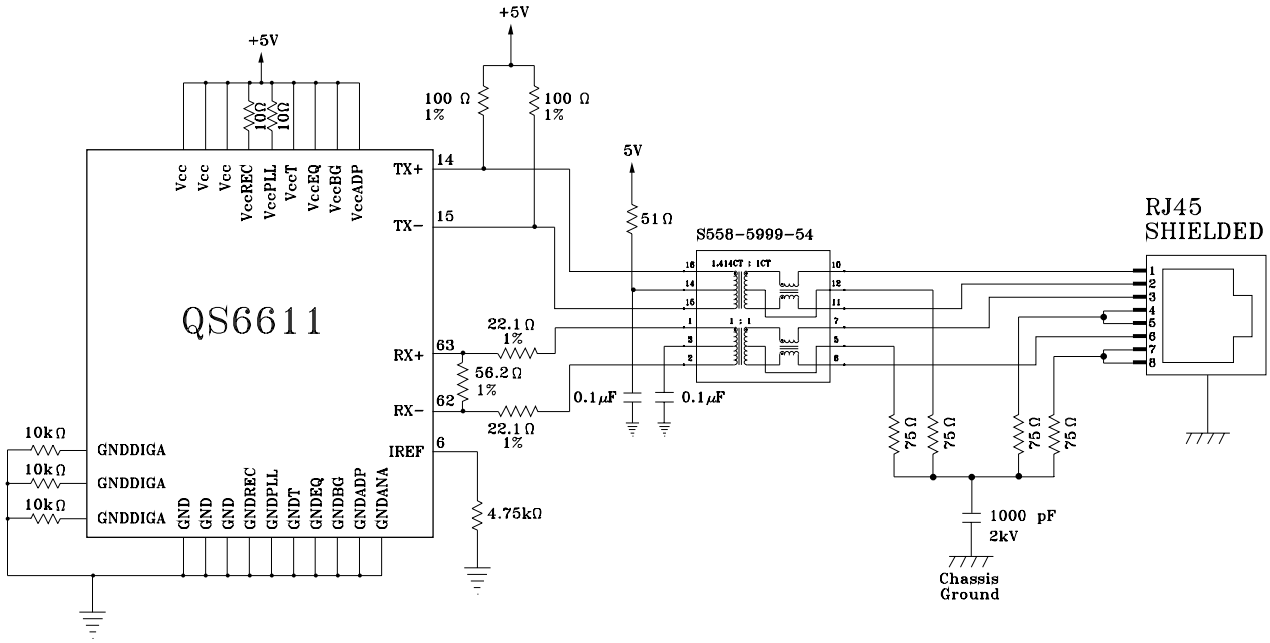
APPLICATION CIRCUIT



APPLICATION NOTES

- These Bel part types have been designed for use in 100 Mbps or 10/100 Mbps data transmission systems over category 5 UTP/STP cable. Each Bel part type provides superior EMI noise suppression, high voltage isolation, wave shaping and fast, but controlled rise times. All parts meet IEEE 802.3 standards, which includes 350μH OCL (inductance) when 8mA of DC bias is applied.
- These Bel part types have been tested and qualified for use with the Quality Semiconductor 6611 transceiver in adapter card applications. No impedance matched common mode termination is recommended since proper implementation of this type of circuit requires quiet grounding, not readily available in adapter card applications. Bel also provides dual, 2-port (S558-5999-83) and quad, 4-port (S558-5999-77) designs for multi-port applications to provide board space and cost efficiency with no performance degradation. These dual and quad devices can be found on Bel data sheet 960009. Since the transmit turns ratio of the S558-5999-83 and -77 is 1.23:1 (due to the specifications of the QSI 6612 chipset), implementation with the QSI 6611 is accomplished using slightly higher current achieved by changing the 5 volt resistors from 100ý to 86ý and the IREF resistor from 4.75ý to 4.53ý.
- 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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