






COMMON MODE CHOKE

For Fibre Channel, Gigabit Ethernet, and IEEE 1394 Applications



-  Common Mode Attenuation from 200 MHz to 2.5 GHz
-  Reduces radiated emissions and improves noise immunity
-  235°C Peak Reflow temperature rating
-  Surface mount, auto-insertable package
-  Industrial temperature range

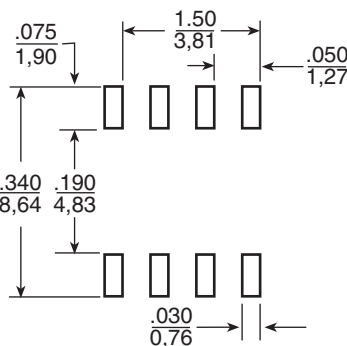
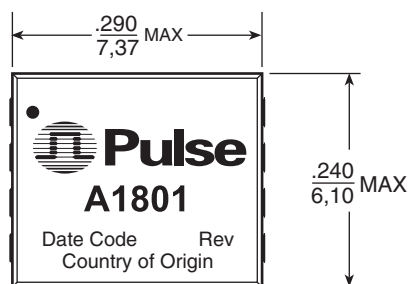
Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

| Part Number | Common Mode Attenuation (dB TYP) | | | | | | Primary Inductance OCL (μH MIN) | DCR (Ω MAX) |
|-------------|-------------------------------------|--------|--------|--------|--------|--------|---------------------------------------|----------------|
| | 200 MHz | 500MHz | 1.0GHz | 1.5GHz | 2.0GHz | 2.5GHz | | |
| A1801 | -11.0 | -11.0 | -11.0 | -10.0 | -9.0 | -7.5 | 3.0 | .15 |

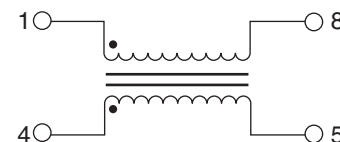
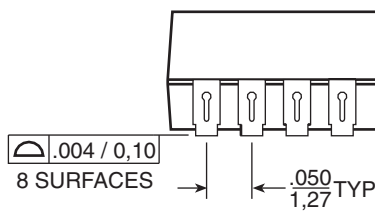
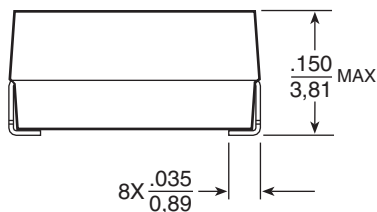
Mechanical

Schematic

A1801



SUGGESTED PAD LAYOUT



Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified, all tolerances are $\pm \frac{.005}{0.13}$

Weight0.2 grams (max)
Tape & Reel1750/reel
Tube80/tube

COMMON MODE CHOKE

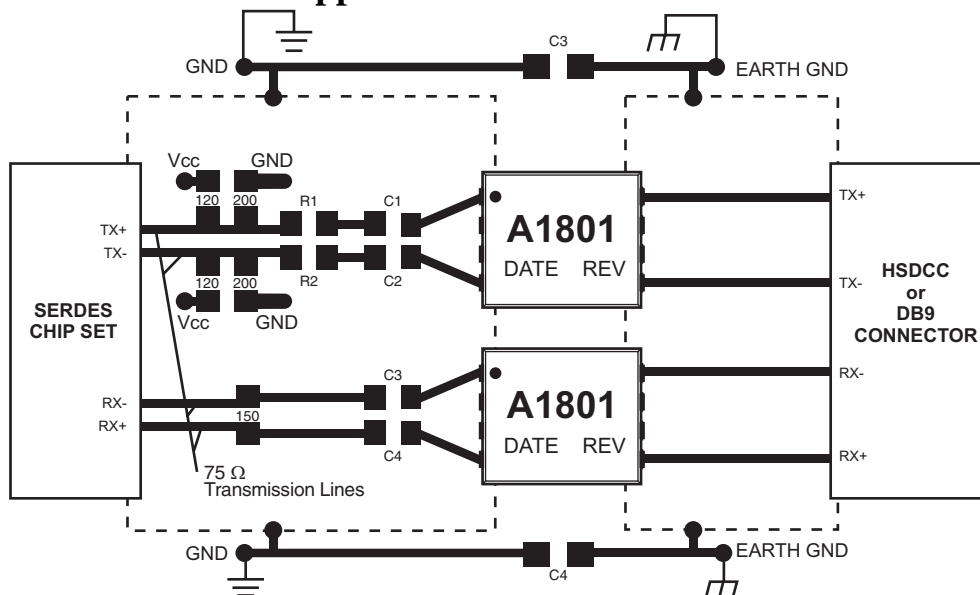
For Fibre Channel, Gigabit Ethernet, and IEEE 1394 Applications



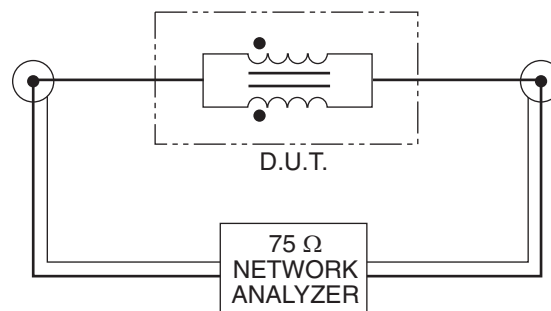
Application Notes:

1. Values for R1 and R2 are determined by system transmit amplitude requirements. A value of 0Ω for R1 and R2 will yield an output with maximum amplitude but distorted due to impedance mismatch. A value of 68Ω will provide an optimum waveform but have 6.0 dB insertion loss. If 6.0dB loss is too great, select at least 15Ω to obtain a reasonable compromise between insertion loss and waveshape. The typical value for C1, C2, C3, and C4 is $0.1\mu\text{F}$.
2. To maintain return loss and signal integrity, transmission line methods must be used when designing the PCB. For best performance the common mode choke should be located no more than 1" from the cable connector.
3. One example of a possible layout is shown below for a Fibre Channel application. Note that actual board layouts will vary based upon specific applications and EMC considerations.

Typical Fibre Channel 150 Ω Application:



Test Circuit, Common Mode Attenuation:



For More Information :

| UNITED STATES (Worldwide) | UNITED KINGDOM (Northern Europe) | FRANCE (Southern Europe) | SINGAPORE (Southern Asia) | TAIWAN, R.O.C. (Northern Asia) | HONG KONG (China/Hong Kong) | DISTRIBUTOR |
|---|--|---|---|---|---|-------------|
| 12220 World Trade Drive San Diego, CA 92128 U.S.A. http://www.pulseeng.com TEL: 858 674 8100 FAX: 858 674 8262 | 1 & 2 Huxley Road The Surrey Research Park Guildford, Surrey GU2 5RE United Kingdom TEL: 44 1483 401700 FAX: 44 1483 401701 | Zone Industrielle F-39270 Orgelet France TEL: 33 3 84 35 04 04 FAX: 33 3 84 25 46 41 | 150 Kampong Ampat #07-01/02 KA Centre Singapore 368324 TEL: 65 6287 8998 FAX: 65 6280 0080 | 3F-4, No. 81, Sec. 1 HsinTai Wu Road Hsi-Chih, Taipei Hsien Taiwan, R.O.C. Tel: 886 2 2698 0228 FAX: 886 2 2698 0948 | 9/F, Phase 2, Tai Sang Shatin Warehouse Centre 6 Wong Chuk Yeung Street Fotan, Shatin, Hong Kong TEL: 852 2788 6588 FAX: 852 2776 1055 | |

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Pulse:

[A1801](#) [A1801T](#)