**RJ45 SINGLE PORT WITH MAGNETICS**

- 100 Base-T Ethernet Application
- Meets IEEE 802.3 & ANSI X 3.263 standards
- Impedance: 100OHMS
- Transmit open circuit inductance (OCL): 350uH (MIN) @100KHz 0.1VRMS with 8mA DC Bias
- Always EU RoHS/ELV Compliant, wave solder capable to 265°C
- Rise Time: 2.5 nano-seconds from 10 to 90 percent
- RJ45 jack cavity conforms to FCC rules and regulations Part 68, SUB Part F
- Standard operating temp: 0°C to +70°C (see footnote)
- Industrial operating temp: -40°C to +85°C (see footnote)

**Electrical Specifications @25°C**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>OCL(uH min) @100KHz/0.1V with 8mA DC Bias</th>
<th>Turns Ratio chip: cable (±3%)</th>
<th>EMI Fingers</th>
<th>LED (L/R)</th>
<th>Insertion Loss (dB Max)</th>
<th>Return Loss (dB Min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR1009-1326</td>
<td>350</td>
<td>1CT:1CT</td>
<td>YES</td>
<td>G/Y</td>
<td>1.1</td>
<td>18</td>
</tr>
</tbody>
</table>

<p>| Electrical Specifications @25°C |</p>
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Cross talk (dB Min)</th>
<th>CMRR (dB Min)</th>
<th>HI-POT (VDC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR1009-1326</td>
<td>35</td>
<td>33-20*LOG(f/50)</td>
<td>2250</td>
</tr>
</tbody>
</table>

*Complete part number by inserting “S” for Standard Temp. or “I” for Industrial Temp.

All specifications subject to change without notice.

**MECHANICAL**

![MECHANICAL Diagram]

Unless otherwise specified all tolerances are: ± 0.25 in mm
SCHEMATICS:

Chip side | Cable Side
---|---
P4 | J1
P1 | J2
P2 | J3
P3 | J4
P6 | J5
P5 | J6
P7 | J7
GND P8 | J8

R1
R2
R3
R4
C1

PCB Layout:

Notes:
1. R1-R4=75 Ohms, 1/16W, 5% Resistors.
2. C1=1000pF, 2KV Decoupling Capacitor.
3. LED Compliant with IEC60825-1 Safety of Laser Products when operated up to 20mA.
4. LED Forward Voltage: 2.1V(TYP), LED Power Dissipation: 105mW, LED Peak Wavelength: Green=565nm, Yellow=585Nm

PCB Layout:

Materials and Finish:
Housing: PBT, Flammability Rating 94V-O.
Shell: C2680 Brass, 025mm thick, 80+150u° nickel plating.
Mod Jack Contact: Phospher Bronze, 0.35mm thick, Gold Plated.
LED: Diffused Epoxy Lens, 0.5x0.5mm Carbon Steel wireframe leads.