

**MGH7V
(HB7Vxx)
Series**

**REV
G**

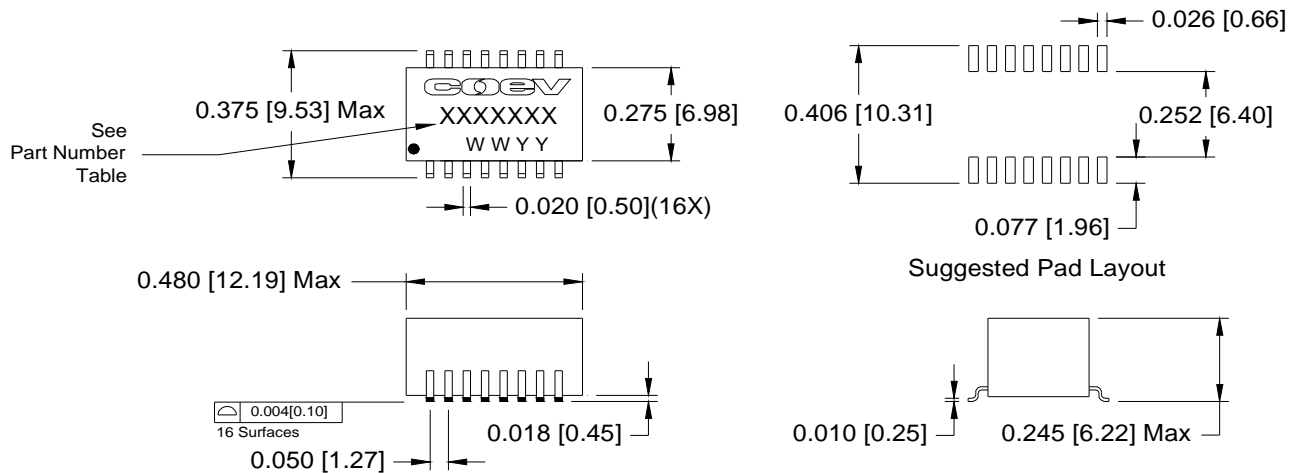


**Product
Description**

**Ethernet Magnetics, PoE Applications, Extended Temperature
Single Port, Surface Mount Module**

Standard Features

- Single port interface for 10/100Mbps Ethernet applications
- Cable side data pairs capable of 350mA DC
- Designed for IP phone or switch applications
- Compact footprint
- Compliant with IEEE 802.3 and ANSI X3.263 Standards
- Surface mount package designed for reflow process (240°C peak)
- Tape & Reel Packaging standard
- Package molded using UL94-V0 rated material



All dimensions are in inches and [millimeters].
All dimensions are ±0.005 [0.127] unless otherwise noted.

10/100BASE-T Electrical Characteristics @ 25°C

Inductance: 350uH Min with 8mADC Bias
(See part number table for operating temperature range)
(Each transformer measured on the cable side)

Dielectric Isolation: 1500Vrms Minimum

| Frequency | Insertion Loss (dB Max) | Return Loss (dB Min) (Note 1) | Crosstalk Attenuation (dB Min) | Transmit CMRR (dB Min) | Receive CMRR (dB Min) |
|------------------|-------------------------|-------------------------------|--------------------------------|------------------------|-----------------------|
| 0.1MHz - 1MHz | 1.0 | 18.0 | 43.0 | 42.0 | 42.0 |
| 1.1MHz - 15MHz | 0.5 | 18.0 | 43.0 | 42.0 | 42.0 |
| 15.1MHz - 30MHz | 0.8 | 18.0 | 43.0 | 42.0 | 42.0 |
| 30.1MHz - 60MHz | 0.8 | 12.0 @ 60MHz | 43.0 | 42.0 | 42.0 |
| 60.1MHz - 80MHz | 1.1 | 12.0 @ 80MHz | 38.0 | 38.0 | 38.0 |
| 80.1MHz - 100MHz | 1.2 | 10.0 @ 100MHz | 38.0 | 35.0 | 35.0 |

Notes:

- Minimum return loss is as follows with a circuit impedance of 100 Ohms +/- 15%:
 0.1MHz - 29.9MHz = 18dB
 30MHz - 60MHz = 18 - 20Log₁₀(f/30) dB where f is in MHz
 60MHz - 80MHz = 12dB
 80.1MHz - 100MHz = 10dB

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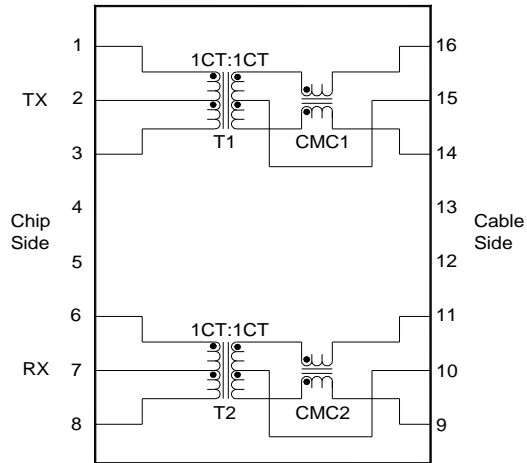
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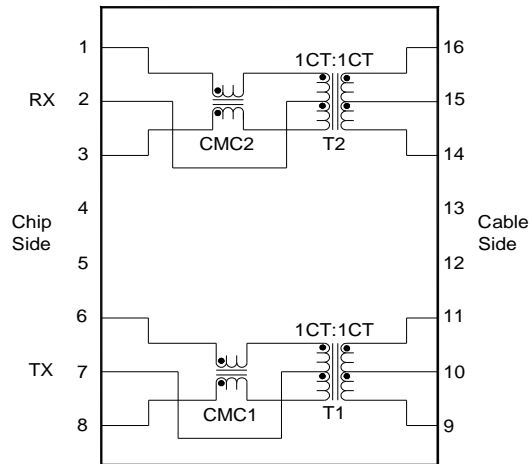
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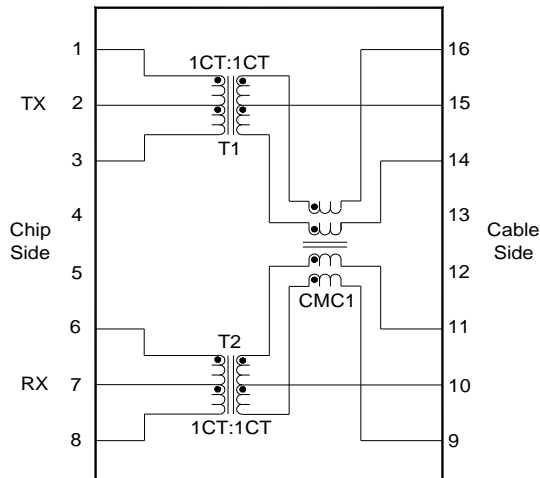
Schematic A



Schematic B



Schematic C



Part Number Table

| Part Number | Schematic | Temperature Range |
|-------------|-----------|-------------------|
| HB7V26ET | A | -40°C to +85°C |
| HB7V26ET-1 | B | -40°C to +85°C |
| MGH7V-00001 | C | 0°C to 70°C |
| MGH7V-00002 | C | -40°C to +85°C |
| | | |
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