

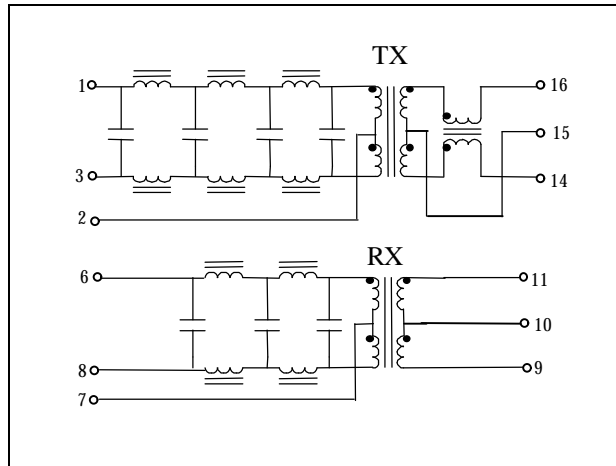
Feature

- ◆ "G" stands for RoHS.
- ◆ High attenuation from 7th & 5th order filter used for TX & RX signal respectively.
- ◆ Designed to meet IEEE 802.3 requirement.
- ◆ For MAUs, hubs, and motherboard applications
- ◆ Operating temperature: 0°C to +70°C.
- ◆ Popular component , high value , low cost.
- ◆ Storage temperature: -20°C to +85°C.

Specifications @25°C

| Parameter | Condition | Min. | Typ | Max. | unit |
|--------------------|-----------|---------|-------|------|------|
| Turn Ratio(TX) | | | 1 : 1 | | |
| (RX) | | | 1 : 1 | | |
| Insertion loss | @1-10MHz | | | -1.0 | dB |
| Attenuation(TX/RX) | @30MHz | -32/-20 | | | dB |
| | @50MHz | -35 | | | dB |
| | @100MHz | -35 | | | dB |
| Return loss(TX/RX) | @5-10MHz | -15.0 | | | dB |
| Cross talk | @1-10MHz | -35.0 | | | dB |
| CMRR | @5-10MHz | -50.0 | | | dB |
| | @50MHz | -40.0 | | | dB |
| Isolation Voltage | | | 1500 | | Vrms |

Schematic



Description

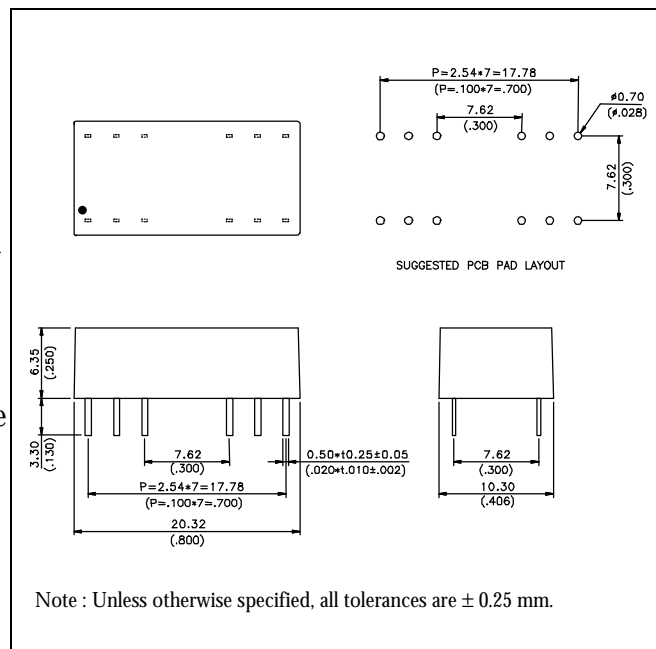
The 20F001NG is a low pass filter module that have been specifically designed to implement the functionality of analog interface for 10 Base-T Ethernet application .

This module integrate a number of superior low pass filter to maximize attenuation in the stopband while minimizing insertion loss ,return loss and delay distortion in the passband .

With high impedance common mode choke ,this device significantly reduce the high frequency noise level which may contribute to conducted and radiated emissions.

The transformer built in this module provide high voltage isolation to protect against static charge damage on the twist pair line.

Dimension



Test Requirements and Procedures

| No | Item | Requirement | Test or Inspection Method |
|----|-------------------------------|---|---|
| 1 | Examination of product | Meet requirements of product drawing | Visual, X-Ray, Microscope and so on. |
| 2 | Solderability | Max. 5% de-wetting, inspection with 10 times magnification. | After steamy 1 hrs , dip solder 260°C Duration: 2 ± 0.5 seconds. Ref: Sony Technical Standards SS-00254-4 |
| 3 | Resistance to soldering heat | No functional damage. | SMT: peak temp. 260°C Ref: Sony Technical Standards SS-00254-4 |
| 4 | Vibration | No physical damage. | Random vibration / Overall : 1.15 g rms Freq. (Hz) : 1 → 4 → 100 → 200 PSD (g ² /Hz) : 0.0001 → 0.01 → 0.01 → 0.001 Test Axis/ Time : Top / 30 mins Bottom / 10 mins X axis : 10 mins Y axis : 10 mins Ref : ISTA PROJECT 2A |
| 5 | Thermal shock | Contact resistance, Insulation resistance shall meet each specified requirement . | Molded product : - 40°C → + 125°C for 5 cycles (25 , 50 , 100 cycles for D.V.T.) Ref:MIL-STD-202 method 107 |
| 6 | Temperature-humidity exposure | Contact resistance, Insulation resistance shall meet each specified requirement . | Molded product : -10°C~65°C / 95% R.H / bias100Vdc 96 hrs(168 , 500 hrs for D.V.T) Ref:MIL-STD-202 method 103 |
| 7 | High temperature exposure | Contact resistance Insulation resistance shall meet each specified requirement | Molded product : + 125°C , bias: 25 Vdc 96 hrs(168 , 500 hrs for D.V.T) Ref:MIL-STD-202 method 103 |