

**Features**

**Description:**

- ◆ RJ45/Dual USB Combo is a Through Hole integrated connector module with a single RJ45 Tab-UP in combination with USB connector ports (refer to illustration below). The RJ45 connector internal magnetics are designed to support 10/100Base-TX applications such as LAN-on-Motherboard and PC applications.

**Features and Benefits:**

- ◆ LAN interface suitable for 10/100Base-TX applications
- ◆ RJ45/USB stacked design saves on PCB real estate
- ◆ USB module complies with USB 2.0 standards and meets CAT5 Fast Ethernet industry performance standard
- ◆ Magnetics are 100% electrically tested for HI-POT and continuity

**Electrical Performance Summary:**

- ◆ Internal magnetics options available
- ◆ Meets or exceeds IEEE 802.3 and ANSI X3.263 standards
- ◆ 350 uH minimum OCL with 8 mA bias current
- ◆ High performance for maximum EMI suppression
- ◆ Minimum 2250 DCVrms isolation per IEEE 802.3i/u/af requirement
- ◆ Meets IEEE 802.3 HiPot isolation requirements

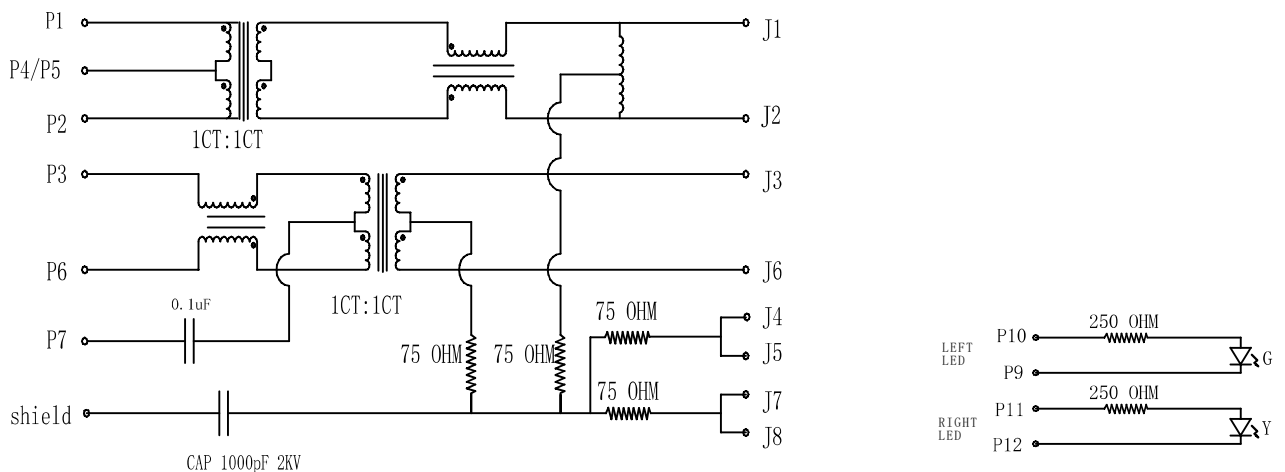
**SPEC**

**Electrical Specifications @25°C - Operating Temperature 0°C to 70°C**

Part Number	EMI Fingers	Turns Ratios		LEDs L/R	Insertion Loss (dB MAX)				Return Loss (dB TYP) (100Ω ± 15Ω)			Crosstalk (dB MIN)		Common Mode Rejection (dB TYP)	Hipot (DC Vrms MIN)
		TX	RX	L/R	1~65 MHz	1~10 MHz	30 MHz	60~80 MHz	1~10 MHz	32~60 MHz	60~100 MHz	1~50 MHz	50~130 MHz	@60 Hz	
<b>RJ-501F03</b>	N/A	1CT:1	1CT:1	G/Y	-1.0	-20	-16	-12	-40	-35	-30	-30	-20	2250	

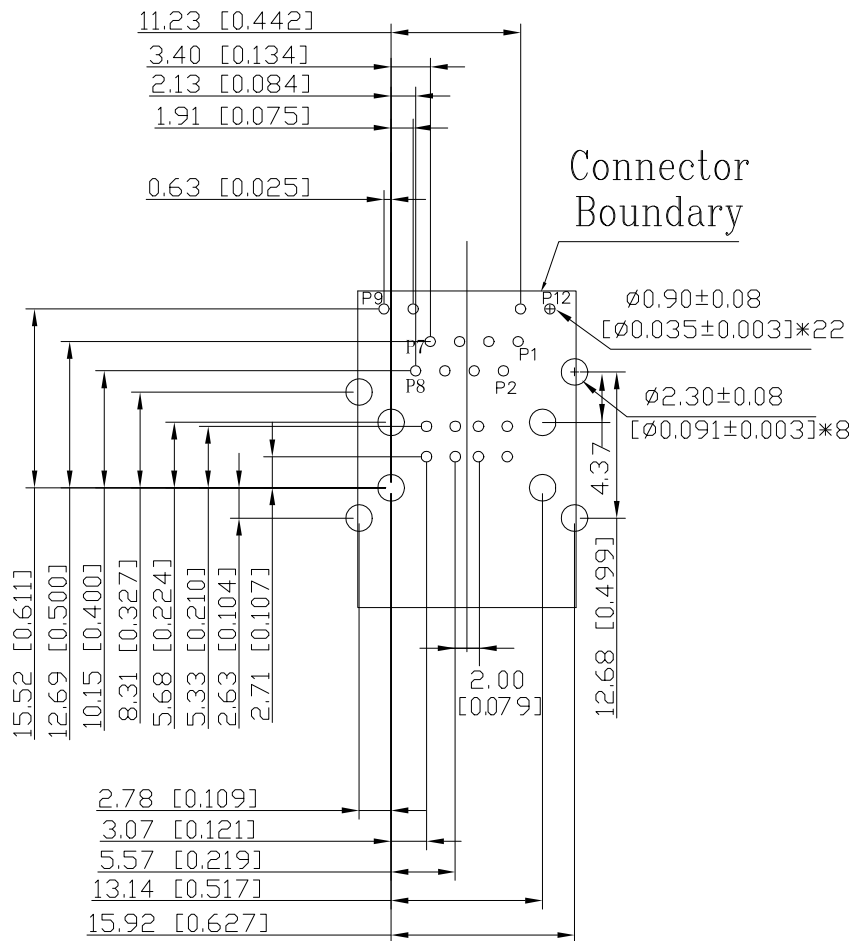
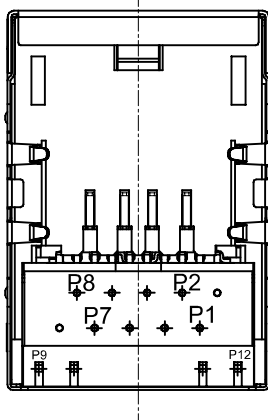
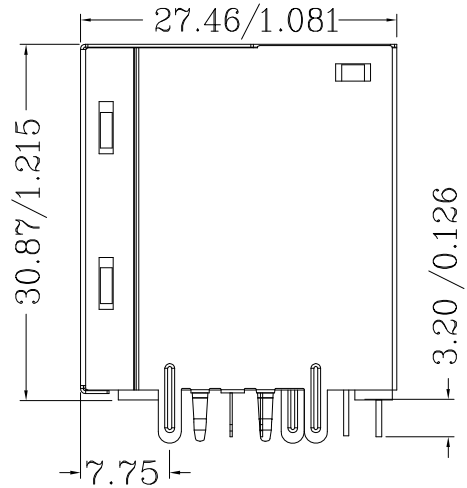
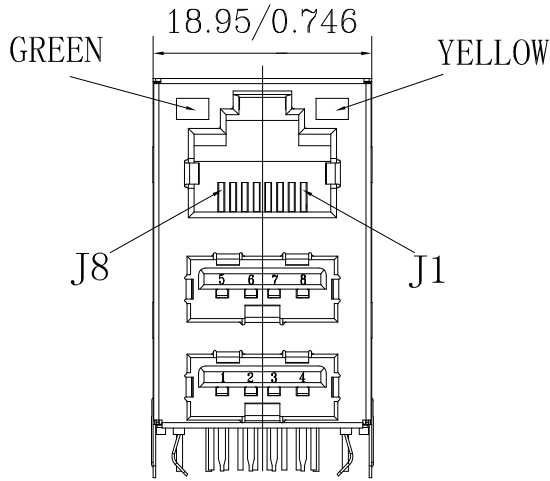
NOTE: 1. Both transmit and receive channels meet IEEE 802.3 specifications  
 2. Different electrical and mechanical specifications can be accommodated  
 3. LEDs Left/Right: G=green, Y=Yellow, O=Orange.

**Schematics**



Note: Connect GND to PCB ground

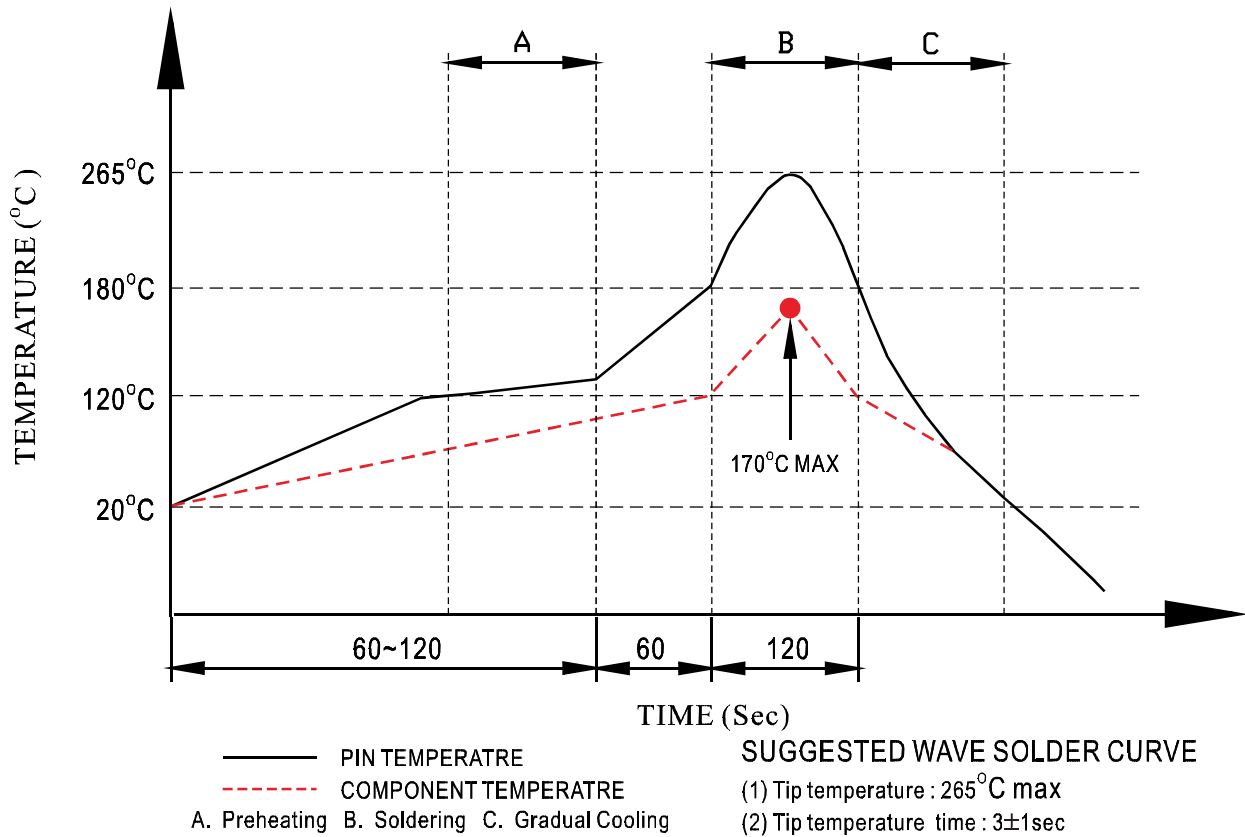
**Mechanicals**



VIEWDE FORM PCB COMPONENT SIDE

UNIT: mm / inch  
 Tolerances: ±0.10 / 0.004

Profile of wave solder



\*The melting point of Sn99.3/Cu0.7

REQUIREMENTS

- ◆ Material
  - ◇ Terminal Parts(Underphating:30u" min. Nickel overall)
    - RJ Terminal: PH. Bronze, Thickness=0.3mm, Finish: Contact Area: 6u" Gold
    - Input Terminal: Brass, Thickness=0.35mm, Finish: 100u" min. Mt. Tin
    - Case Terminal: Brass, Thickness=0.3mm, Finish: 100u" min. Tin
  - ◇ Plastic Parts<UL94V-0>
    - Housing: Thermoplastic, Black
    - Case: Thermoplastic, Black
    - Spacer: Thermoplastic, Black
    - Light Pipe: Thermoplastic, Black
  - ◇ Shield Parts
    - Front Shield: Stainless, Thickness=0.2mm, unplating
    - Back Shield: Stainless, Thickness=0.2mm, Pre-soldering
- ◆ Operating and Storage Temperature
  - Operating Temperature: 0°C to +70°C
  - Storage Temperature: -40°C to +85°C
- ◆ RJ45 Specifications
  - Insulation Resistance 500MΩmin
  - Insertion force with the latch depressed 22N max
  - Removal force with the latch depressed 44N max
  - Locking Force of Plug Latch: 50N min. @60±5 sec
  - Durability: 750 cycles MIN