



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



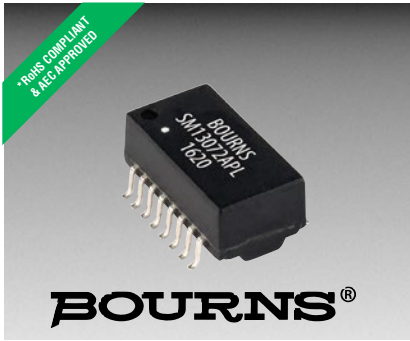
## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





## Features

- IEEE 802.3 Ethernet compatible
- Fully integrated for adapter, hub and motherboard applications
- Expanded temperature range: -40 to +125 °C
- AEC-Q200 Qualified, automotive grade
- RoHS compliant\*

## Applications

- Automotive
- LAN
- Ethernet

# SM13072APL - 10/100 Base-T Transformer

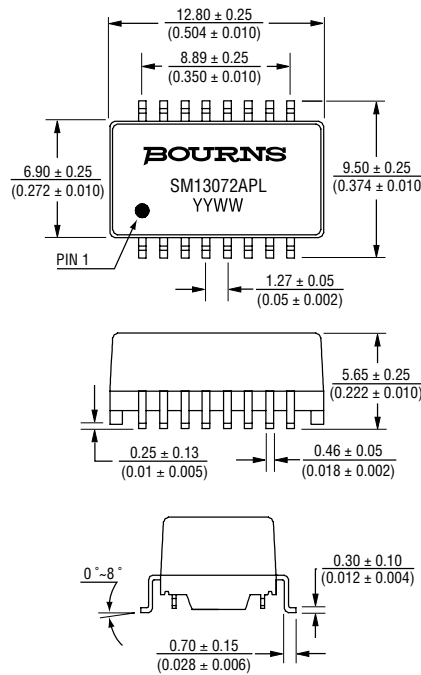
### Electrical Specifications @ 25 °C

Inductance (100 kHz, 0.1 V, 8 mADC)	350 $\mu$ H Min.
Leakage Inductance (100 kHz, 0.1 V)	
TD with TX Shorted	0.5 $\mu$ H Max.
RD with RX Shorted	0.5 $\mu$ H Max.
C <sub>sw</sub> (TD to TX & RD to RX)	
@ 100 kHz, 0.1 V	35 pF Max.
Turns Ratio	
TD : TX	1 : 1 ( $\pm 2$ %)
RD : RX	1 : 1 ( $\pm 2$ %)
DCR	
TD & RD	1.4 ohm Max.
TX & RX	1.0 ohm Max.
Insertion Loss (TD to TX & RD to RX)	
1-100 MHz	-1.1 dB Max.
Return Loss (TD to TX & RD to RX)	
with 100 ohm load)	
1-40 MHz	-16 dB Min.
40-100 MHz	
.....	-10+20*log (f/80 MHz) dB Min.
Cross Talk (Between Each Channel)	
1-60 MHz	-40 dB Min.
60-100 MHz	-35 dB Min.
Common Mode Rejection	
(TD to TX & RD to RX)	
1-60 MHz	-37 dB Min.
60-100 MHz	-30 dB Min.
Differential to Common Mode	
Rejection Ratio	
(TD to TX & RD to RX)	
30 MHz	-35 dB Min.
60 MHz	-35 dB Min.
Hi-Pot (TD to TX & RD to RX)	
@ 1 mA, 60 sec.)	
.....	1500 Vrms & 2250 Vdc
Storage Temperature	-40 to +125 °C
Operating Temperature	-40 to +125 °C

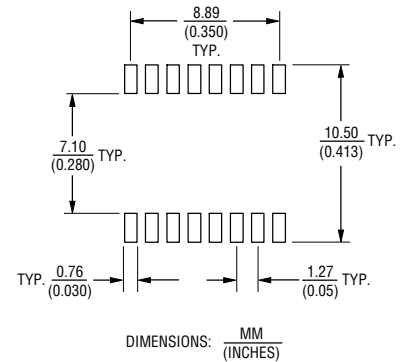
### Packaging Specifications

Tape & Reel ..... 600 pcs./reel

### Product Dimensions



### Recommended Layout



### How To Order

**SM13072 A P E L**

Model \_\_\_\_\_

AEC-Q200 Qualified \_\_\_\_\_

Automotive Grade \_\_\_\_\_

Construction \_\_\_\_\_

  P = Potted \_\_\_\_\_

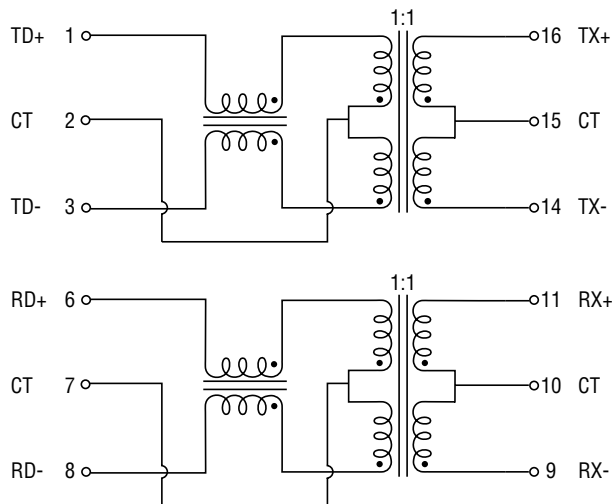
Packaging \_\_\_\_\_

  E = Tape and Reel (600 pcs./reel) \_\_\_\_\_

Termination \_\_\_\_\_

  L = Cu/Ni/Sn (RoHS Compliant) \_\_\_\_\_

### Electrical Schematic



\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

