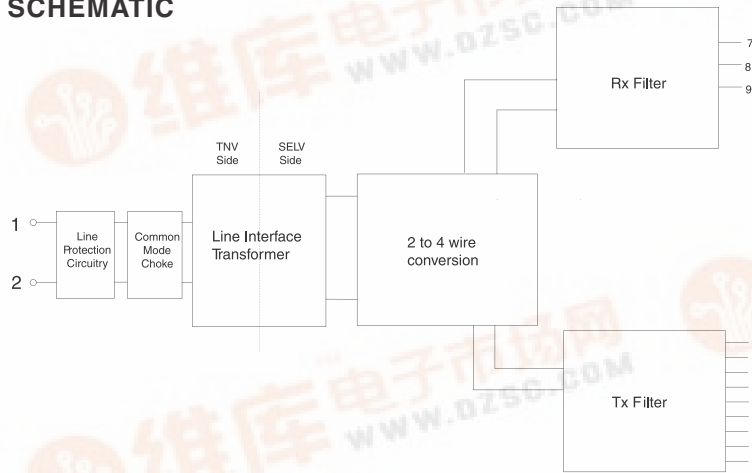# ADSL CPE Hybrid
APC78106

OPERATING TEMPERATURE -40°C TO +85°C

FEATURES

- APC78106 is designed to interface with Alcatel's MTK20150 and MTK20141 ADSL transceiver chip sets to optimize customer premises equipment (CPE) designs. The Hybrid contains every component required between the analog front end chip and the connector including the line interface transformer and common mode chokes, line protection circuitry, transmit and receive filters (excluding line driver and parallel capacitors).

- The hybrid was designed jointly by APC and Alcatel to optimize the transmission capabilities of the "Dynamite" chip set. It meets or exceeds the requirements of the standards as specified in TS101 388, T1.413 and ETR328. It also provides BS EN60950 / IEC60950 / TS 001 / AS/NZS 3260 / CAN/ CSA C22.2 Np. 950-95 / UL1950 and CB Certificate supplementary insulation and UL Component Recognition (File No. E175058).

SCHEMATIC

Pin (1-2)	TNV	Pin 9	Rxn
Pin (3-16)	SELV	Pin 10	8016 pin 4 / EL1510CS pin 3
Pin 1	Tip	Pin 11	8016 pin 2 / EL1510CS pin 1
Pin 2	Ring	Pin 12	8016 pin 3 / EL1510CS pin 2
Pin 3	Txp	Pin 13	N/C
Pin 4	Txn	Pin 14	8016 pin 21 / EL1510CS pin 5
Pin 5	A_Gnd_Tx	Pin 15	8016 pin 23 / EL1510CS pin 7
Pin 6	N/C	Pin 16	8016 pin 22 / EL1510CS pin 6
Pin 7	Hybrid Gnd Plane	Pin 17	N/C
Pin 8	Rxp	Pin 18	N/C

NOTES: ADI 8016 LINE DRIVER = 24 LEAD BATWING
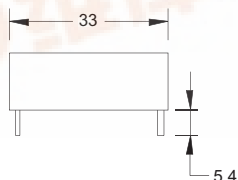   ELANTEC EL1510CS LINE DRIVER = 8 PIN SO

1. ALL TRACES BETWEEN APC PINS 10 AND 14 AND ADI LINE DRIVER PINS 4 AND 21 RESPECTIVELY, MUST BE KEPT SYMMETRICAL, PARALLEL AND EQUIDISTANT.
2. TWO 4.7NF PARALLEL CAPACITORS SHOULD BE PLACED BETWEEN ADI LINE DRIVER PIN 4 AND AGT (A_GND_TX) AND BETWEEN ADI LINE DRIVER PIN 21 AND AGT (A_GND_TX). THESE NEED TO BE PLACED AS CLOSE TO THE ADI LINE DRIVER AS POSSIBLE.
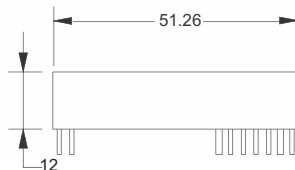
SAFETY NOTE:
        THE CIRCUIT ON THE LC SIDE OF THE TRANSFORMER IS A SELV CIRCUIT AND THE CIRCUIT ON THE LINE SIDE OF THE TRANSFORMER IS A TNV CIRCUIT.
        - CIRCUITRY DESIGNATED AS SELV SHALL ONLY BE CONNECTED TO OTHER SELV CIRCUITS (UNDER NORMAL AND SINGLE FAULT CONDITIONS) IN END INSTALLATION
        - DO NOT PLACE HYBRID AGAINST OTHER COMPONENT PARTS ATTAINING EXCESSIVE TEMPERATURES.

MECHANICAL

End View

33

5.4

Side View

51.26

12

Recommended Pad layout

48.26
33.02
1   9
29.7
18   10
2.54

Recommended hole Ø1.0

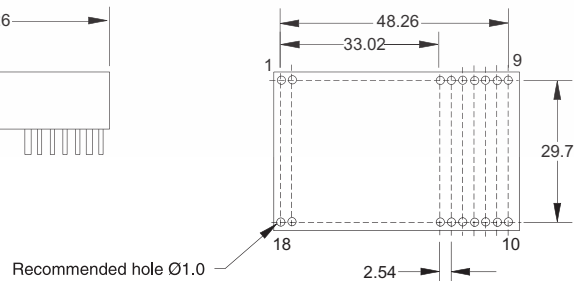NOTES: NOT TO SCALE
           TOLERANCE +/- 0.2MM
           ALL DIMENSIONS IN MM
           PIN DIA. 0.75MM MAX.