



	CPC1001N	Units
Break Down Voltage	20	V
Current Transfer Ratio	200 (TYP)	%
Saturation Voltage	0.3 (MAX)	V

Features

- Small 4 Pin SOP Package
- 100mA Continuous Load Rating
- 1500V_{RMS} Input/Output Isolation
- Machine Insertable, Wave Solderable
- Surface Mount and Tape & Reel Version Available

Applications

- Telecom Switching
- Tip/Ring Circuits
- Modem Switching (Laptop, Notebook, Pocket Size)
- Loop Detect
- Ring Detect
- Current Sensing

Description

CPC1001N is a unidirectional input optocoupler with a single transistor output. Current transfer ratios range from 33% to 1000%.

Approvals

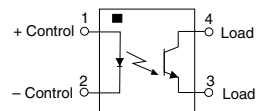
- UL Recognized: File Number E76270
- CSA Certified: File Number LR 43639-10
- Certified to:
 - EN 60950

Ordering Information

Part #	Description
CPC1001N	4 Pin SOP (100/Tube)
CPC1001NTR	4 Pin SOP Surface Mount (2000/Reel)

Pin Configuration

CPC1001N Pinout



Absolute Maximum Ratings (@ 25° C)

Parameter	Ratings	Units
Input Power Dissipation	150 ¹	mW
Input Control Current	100	mA
Peak (10ms)	1	A
Reverse Input Voltage	5	V
Phototransistor	150	mW
Power Dissipation Total Package Dissipation	400	mW
Isolation Voltage Input to Output	1500	V _{RMS}
Operational Temperature	-40 to +85	°C
Storage Temperature	-40 to +125	°C
Soldering Temperature (10 Seconds Max.)	+220	°C

¹ Derate Linearly 1.33 mW/°C

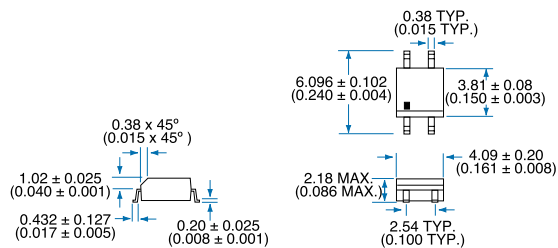
Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at conditions beyond those indicated in the operational sections of this data sheet is not implied.

Electrical Characteristics

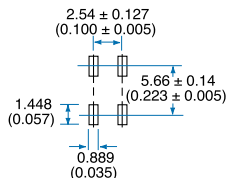
Parameter	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics @ 25°C						
Phototransistor Blocking Voltage	I _C =10μA	BV _{CEO}	20	50	-	V
Phototransistor Offstate leakage Current	V _{CE} =40V, I _F =0mA	I _{CEO}	-	-	100	nA
Saturation Voltage	I _F =10mA, I _C =2mA	V _{SAT}	-	-	0.3	V
Current Transfer Ratio	I _F =5mA, V _{CE} =5V	CTR	33	200	-	%
Output Capacitance	50V, f=1 MHz	C _{OUT}	-	3	-	pF
Input Characteristics @ 25°C						
Input Voltage Drop	I _F =5mA	V _F	0.9	1.2	1.4	V
Input Reverse Current	V _R =5V	I _R	-	-	10	μA

MECHANICAL DIMENSIONS

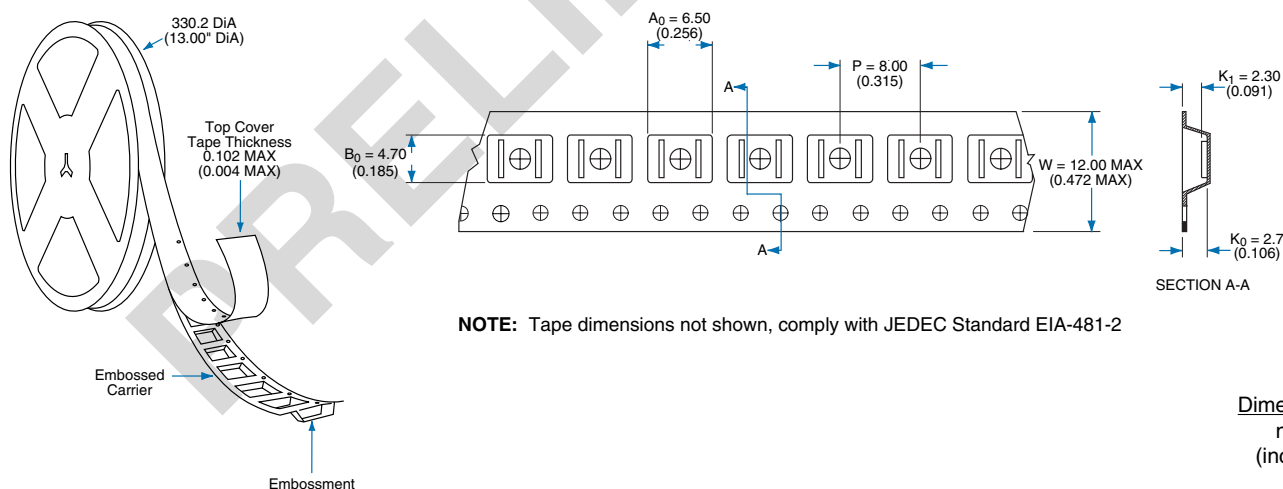
4 Pin SOIC Narrow ("N" Suffix)



PC Board Pattern (Top View)



Tape and Reel Packaging for 4 pin SOIC package



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