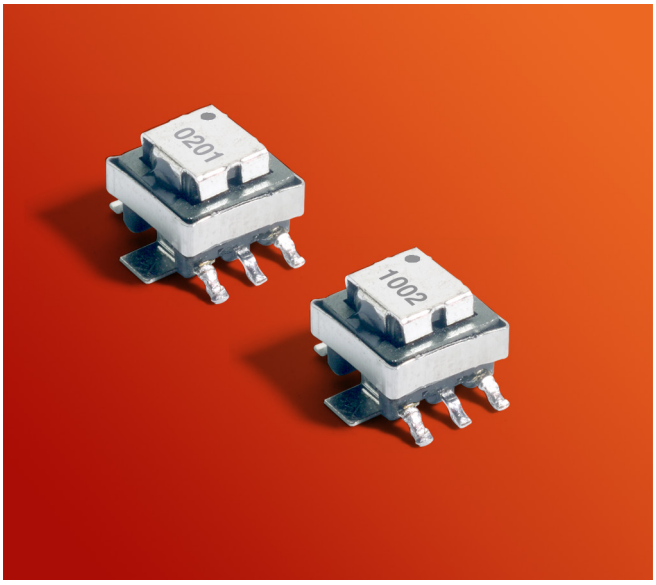
Outgassing Compliant Current Sensors CP-N0530



- For use up to 1 MHz
- Two different pinouts to meet the requirements of different applications.
- Low primary DC resistance
- 500 Vac isolation from secondary to the core

Core material Ferrite

Terminations Tin-lead (63/37) over tin over nickel over phos bronze (pins 1 – 6); tin-lead over gold over nickel over copper (pins 7 – 8). Other terminations also available at additional cost

Weight 0.4 g

Ambient temperature –55°C to +125°C

Maximum part temperature +155°C (ambient + temp rise)

Storage temperature Component: –55°C to +125°C. Tape and reel packaging: –55°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Packaging 250/7″ reel Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 5.6 mm pocket depth

Part number (CP-N0530-)[1]		Turns (N) pri:sec	Inductance[2] min (µH)	DCR (Ohms) pri ref	DCR (Ohms) sec max	Frequency range (kHz)	Sensed current[3] I_{in} (A)	Terminating resistance R_T[4] (Ohms)	Volt-time product[5] (V-µsec)
0201SZ	0202SZ	1:20	81	0.0007	0.400	46 – 1000	10	2.0	10.8
0301SZ	0302SZ	1:30	180	0.0007	0.870	31 – 1000	10	3.0	16.2
0401SZ	0402SZ	1:40	320	0.0007	1.14	23 – 1000	10	4.0	21.6
0501SZ	0502SZ	1:50	500	0.0007	1.50	19 – 1000	10	5.0	27.0
0601SZ	0602SZ	1:60	730	0.0007	1.98	15 – 1000	10	6.0	32.4
0701SZ	0702SZ	1:70	980	0.0007	4.75	13 – 1000	10	7.0	37.8
1001SZ	1002SZ	1:100	2000	0.0007	5.50	9 – 1000	10	10.0	54.0
1251SZ	1252SZ	1:125	3000	0.0007	6.50	7 – 1000	10	12.5	67.5

1. When ordering, specify **termination** and **screening** codes:

CP-N0530-1252SZ

Termination **S** = Tin-lead (63/37)
T = RoHS Tin-silver-copper (95.5/4/0.5)

Screening: **Z** = Unscreened
H = Coilcraft CP-SA-10001 Group A
1 = EEE-INST-002 (Family 1) Level 1
2 = EEE-INST-002 (Family 1) Level 2
3 = EEE-INST-002 (Family 1) Level 3
4 = MIL-STD-981 (Family 03) Class B
5 = MIL-STD-981 (Family 03) Class S
F = ESCC3201 (F4 operational life performed at 105°C)

- Screening performed to the document's latest revision.
- Lot qualification (Group B) available.
- Testing T and U have been replaced with more detailed codes 4, 5, and 1, 2, 3, respectively. Codes T and U can still be used, if necessary. Custom testing also available.

2. Inductance measured between secondary pins at 100 kHz, 0.1 Vrms.
3. Primary current of 10 A causes approximately 25°C temperature rise from 25°C ambient. Higher current causes a greater temperature rise (see Temperature Rise vs Current curve).
4. Terminating resistance (R_T) value is based on 1 Volt output with 10 Amps flowing through the primary. Varying terminating resistance increases or decreases output Voltage/Ampere according to the following equation: R_T (Ohms) = $V_{out} \times N_{sec}/I_{in.}$
5. Volt-time product is for the secondary, between pin 6 and 4 for CP-N0530-xxx1 and between pin 1 and 3 for CP-N0530-xxx2.
6. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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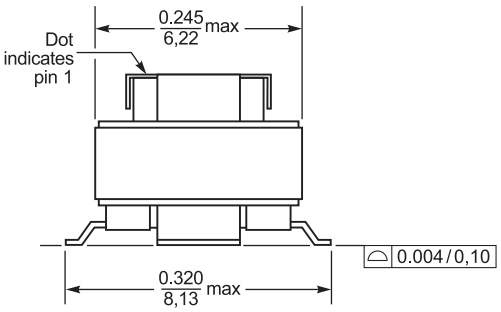
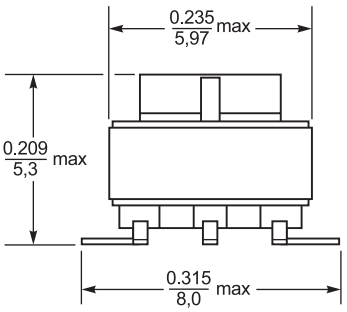
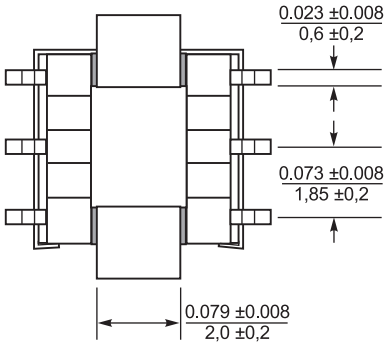
Document CP385-1 Revised 05/06/21

CP-N0530 Outgassing Compliant Current Sensors

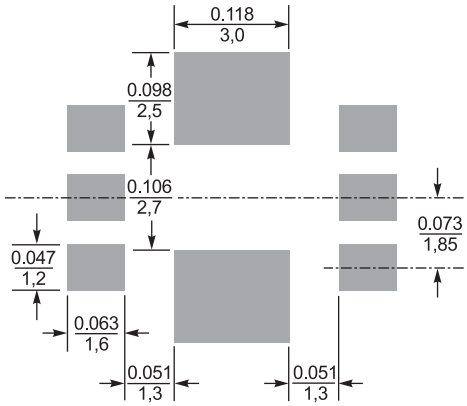
Dimensions







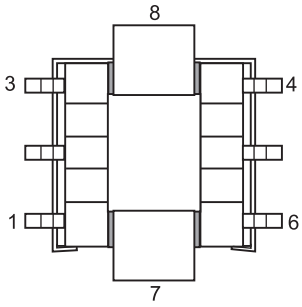
Dimensions are in inches / mm



Suggested Land Pattern

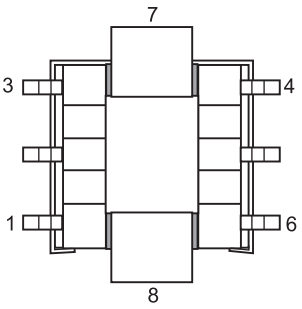
Pinouts

CP-N0530-xxx1



Bottom View

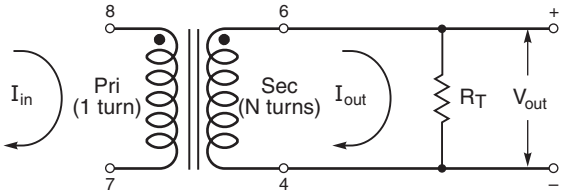
CP-N0530-xxx2



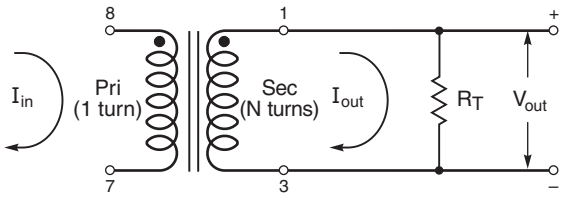
Bottom View

Typical Circuits

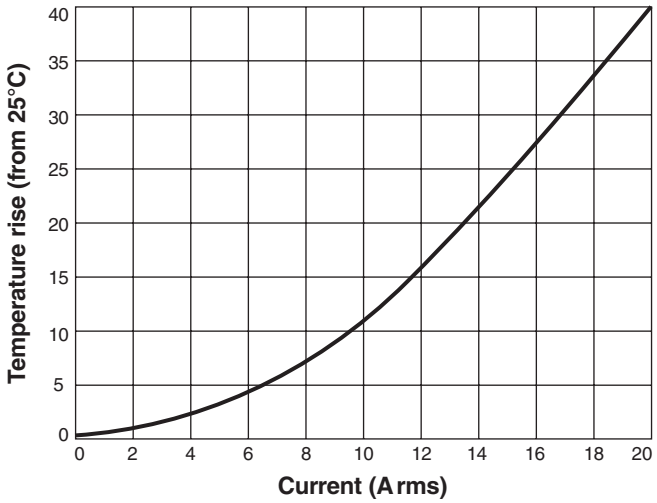
CP-N0530-xxx1



CP-N0530-xxx2



Temperature Rise vs Current



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Document CP385-2 Revised 05/06/21