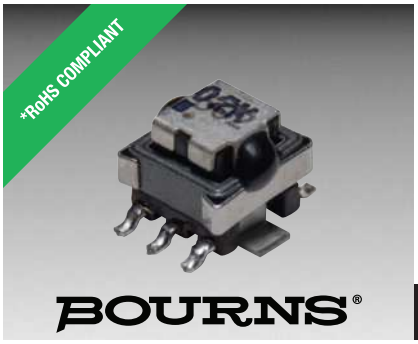


Features

- Rated current on primary up to 20 A for PCS020, up to 40 A for PCS040
- Surface mount
- Frequency up to 1 MHz
- Operating temp: -40 °C to 125 °C
- RoHS compliant*

Applications

- Switched-mode power supplies
- Motor control
- Overload sensing
- AC current applications

PCS Series Current Sense Transformers

General Specifications

Operating Temperature..... -40 °C to +125 °C
Isolation Between Windings
PCS020.....500 V_{rms}
PCS040.....800 V_{rms}
Rated current on primary
PCS020.....Up to 20 A (10 A typical)
PCS040..... Up to 40 A
Frequency.....Up to 1 MHz
Moisture Sensitivity Level.....1

Additional Information

Click these links for more information:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Electrical Specifications @ 25 °C

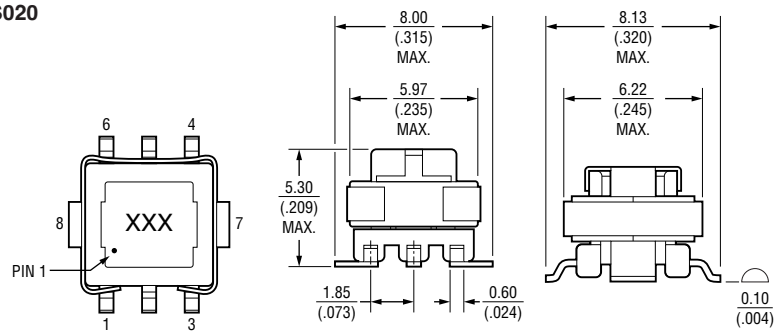
Bourns Part Number	Turns Ratio Primary : Secondary	Secondary Inductance Min. (mH)	DCR		Volt-time Product on Secondary Max. (V-µsec)	Terminating Resistance (1 V Output at Rated Current) (Ω)
			Primary Ref. (mΩ)	Secondary Max. (Ω)		
PCS020-EE05081S	1 : 20	0.081	7	0.4	10.8	1
PCS020-EE05180S	1 : 30	0.18	7	0.87	16.2	1.5
PCS020-EE05320S	1 : 40	0.32	7	1.14	21.6	2
PCS020-EE05500S	1 : 50	0.5	7	1.5	27	2.5
PCS020-EE05730S	1 : 60	0.73	7	1.98	32.4	3
PCS020-EE05980S	1 : 70	0.98	7	4.75	37.8	3.5
PCS020-EE0502KS	1 : 100	2.0	7	5.5	54	5
PCS020-EE0503KS	1 : 125	3.0	7	7	67.5	6.25
PCS040-EF13340S	1 : 20	0.34	1	0.18	50.8	0.5
PCS040-EF13760S	1 : 30	0.76	1	0.265	76.2	0.8
PCS040-EF1301KS	1 : 40	1.36	1	0.56	101.6	1
PCS040-EF1302KS	1 : 50	2.12	1	0.705	127	1.3
PCS040-EF1303KS	1 : 60	3.06	1	0.85	152.4	1.5
PCS040-EF1304KS	1 : 70	4.16	1	1	177.8	1.8
PCS040-EF1305KS	1 : 80	5.44	1	1.15	203.2	2
PCS040-EF1308KS	1 : 100	8.5	1	1.45	254	2.5
PCS040-EF1313KS	1 : 125	13.3	1	1.85	317.5	3.1
PCS040-EF1319KS	1 : 150	19.2	1	2.25	381	3.8
PCS040-EF1334KS	1 : 200	34	1	4.06	508	5

CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant.
See www.P65Warnings.ca.gov

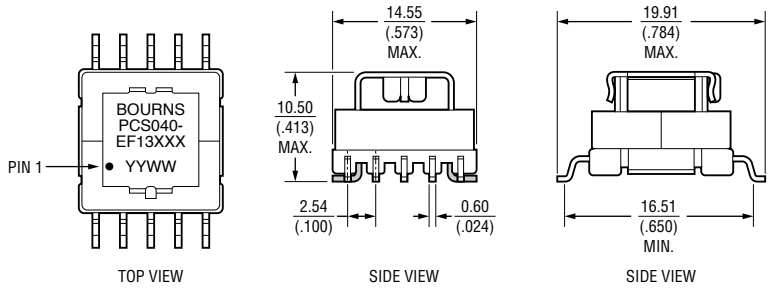
* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
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Product Dimensions

PCS020



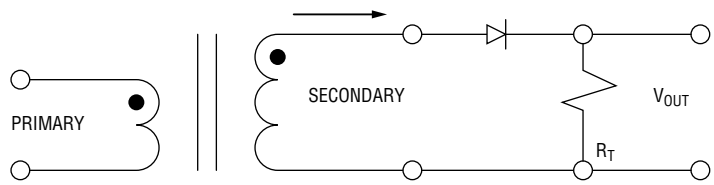
PCS040



DIMENSIONS: MM / (INCHES)

Unless otherwise specified, all tolerances are ± 0.25 / (.010)

Application Circuit



Terminating resistor R_T is based on 1 volt output with the rated current 20 amps for the PCS020 and 40 amps for the PCS040 through the Primary. The terminating resistor can be calculated with the following equation: $R_T = V_{out} * N_{sec} / I_{prim}$.

Materials

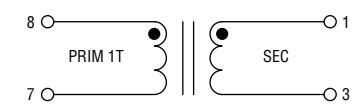
Core P4
Bobbin PM9630
Wire ..... XUEW and UEWH
Tape PI-310
Glue S-9001
Clip SUS301
Packaging
PCS020..... 1000 pcs. per 13-inch reel
PCS040..... 300 pcs. per 13-inch reel

Typical Part Marking

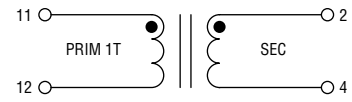
Bourns Part Number	Marking
PCS020-EE05081S	081
PCS020-EE05180S	180
PCS020-EE05320S	320
PCS020-EE05500S	500
PCS020-EE05730S	730
PCS020-EE05980S	980
PCS020-EE0502KS	02K
PCS020-EE0503KS	03K
PCS040-EF13340S	PCS040-EF13340S
PCS040-EF13760S	PCS040-EF13760S
PCS040-EF1301KS	PCS040-EF1301KS
PCS040-EF1302KS	PCS040-EF1302KS
PCS040-EF1303KS	PCS040-EF1303KS
PCS040-EF1304KS	PCS040-EF1304KS
PCS040-EF1305KS	PCS040-EF1305KS
PCS040-EF1308KS	PCS040-EF1308KS
PCS040-EF1313KS	PCS040-EF1313KS
PCS040-EF1319KS	PCS040-EF1319KS
PCS040-EF1334KS	PCS040-EF1334KS

Electrical Schematic

PCS020



PCS040



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How To Order

PCS 020 - EE05 081 S

Model
PCS = Current Sense Transformer

Rated Current
020 = 20 A
040 = 40 A

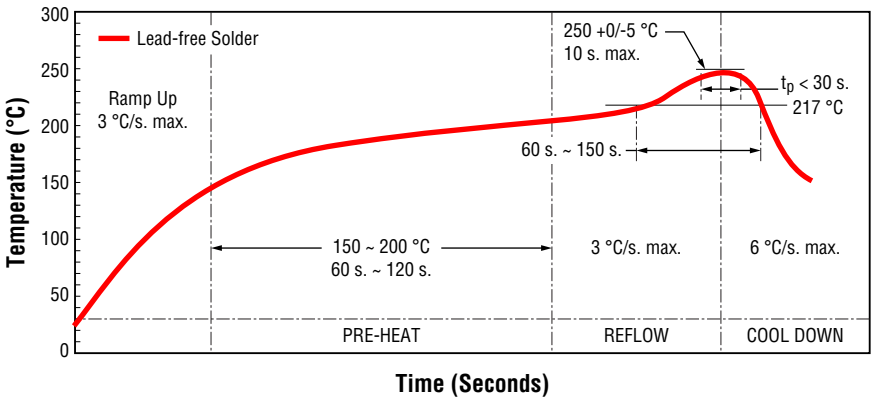
Bobbin Size
EE05 = Bobbin EE5
EF13 = Bobbin EF12.6

Inductance (see table)
081 = 81 μH

PCB type
S = SMD

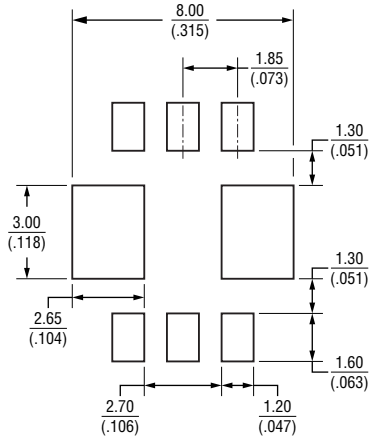
Soldering Profile

The duration from room temperature (25 °C) to peak temperature is 8 minutes maximum.

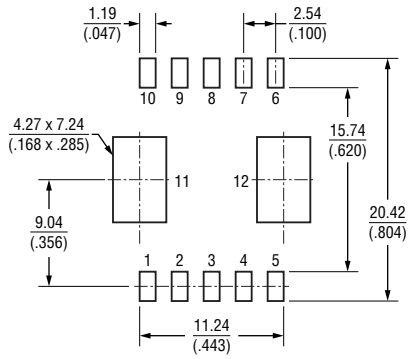


Recommended Layout

PCS020



PCS040

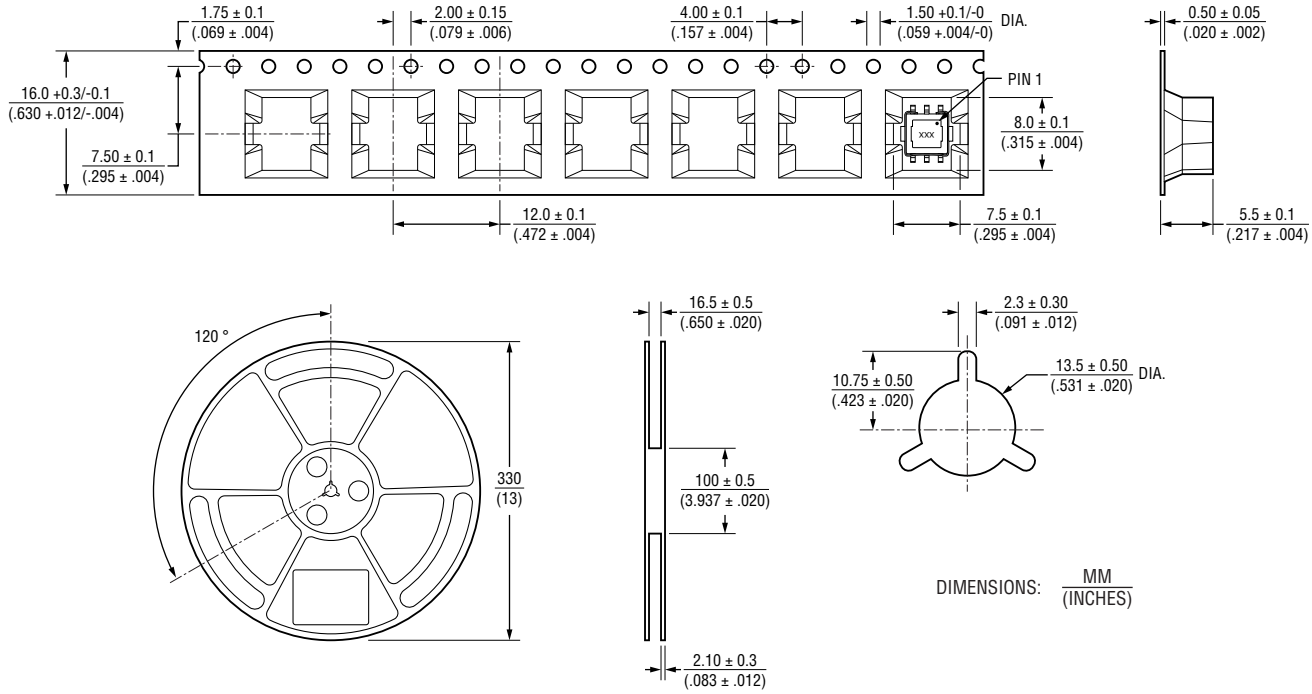


DIMENSIONS: MM / (INCHES)

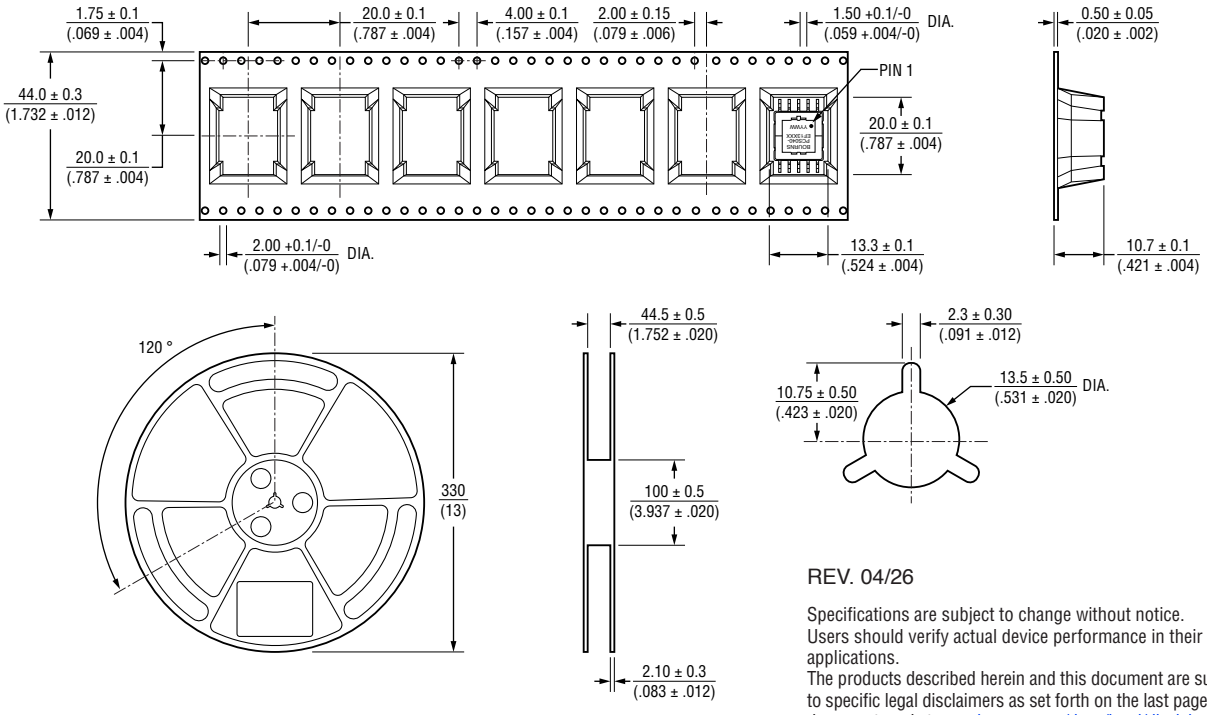
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Packaging Specifications

PCS020



PCS040



REV. 04/26

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