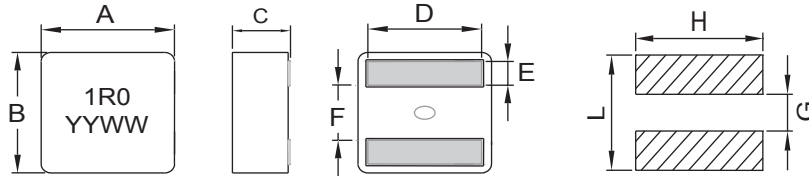




# Shielded High Current Power Choke

# PCXA503

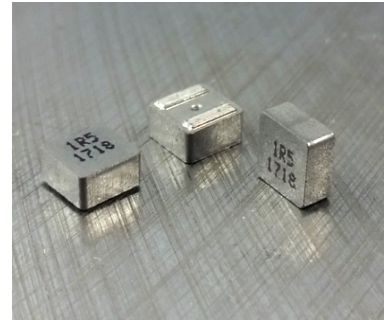


Dimensions:  $\frac{\text{Inches}}{\text{(mm)}}$

A	B	C	D	E	F
.217±.008 (5.5±0.2)	.209±.008 (5.3±0.2)	.114±.008 (2.9±0.2)	.169±.012 (4.3±0.3)	.043±.008 (1.1±0.2)	.091±.010 (2.3±0.25)

Recommend PCB Layout

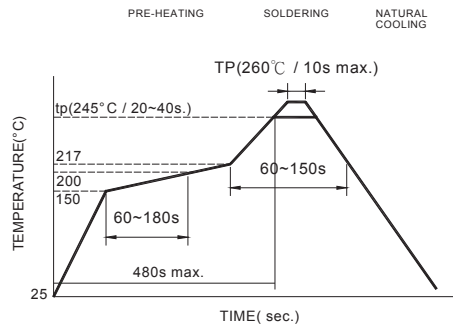
L	G	H
.177 (4.5) Ref	.079 (2.0) Ref	.185 (4.7) Ref



Allied Part Number	Inductance (μH) ±20% @ 0A	DCR (mΩ) Typ.@25°C	DCR (mΩ) Max@25°C	Irms (A) Typ.		Isat (A)	
				20°C Rise	40°C Rise	Typ	Max
PCXA503-R15M	0.15	2.10	2.31	14.3	22.2	36.0	32.5
PCXA503-R16M	0.16	2.12	2.33	14.2	22.2	35.0	32.0
PCXA503-R33M	0.33	3.20	3.52	13.8	19.2	28.0	26.0
PCXA503-R47M	0.47	3.75	4.13	13.7	18.4	26.0	24.0
PCXA503-R56M	0.56	4.05	4.52	13.6	17.7	22.2	20.2
PCXA503-R60M	0.60	4.11	4.52	13.6	17.7	22.0	20.0
PCXA503-R80M	0.80	5.14	5.65	10.1	13.1	20.0	18.0
PCXA503-R82M	0.82	5.25	5.78	9.90	12.9	19.7	17.6
PCXA503-1R0M	1.00	6.90	7.60	9.00	12.2	16.5	14.3
PCXA503-1R2M	1.20	8.80	9.70	8.50	11.0	15.0	13.5
PCXA503-1R5M	1.50	10.1	11.2	8.00	10.5	14.0	12.5
PCXA503-1R8M	1.80	11.5	12.7	7.60	10.1	12.3	11.3
PCXA503-2R2M	2.20	13.2	14.5	7.20	9.70	10.0	9.0
PCXA503-3R3M	3.30	21.0	23.1	5.90	8.10	9.5	8.7
PCXA503-4R7M	4.70	33.0	36.3	4.30	5.90	8.2	7.0

All specifications subject to change without notice.

### Reflow Soldering



Reflow times: 3 times max.

### Features

- High Operating Temperature Range
- High Efficiency
- High Current with Soft Saturation
- Low DCR
- Suitable for pick and place
- Very low acoustic noise and very low leakage flux noise.

### Electrical

**Inductance Range:** 0.15μH to 4.7μH  
**Tolerance:** ±20% Across entire series  
**Test Frequency:** 100KHz, 0.1V  
**Operating Temp:** -40°C to +125°C  
**MSL:** Level 1  
**Irms:** Current at which ΔT=20°C & ΔT=40°C temp rise without core loss.  
**Isat:** Current at which Inductance drop is approximately 30%. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.

### Resistance to Soldering Heat

**Pre-Heat:** 150°C, 1 minute.  
**Solder Composition:** Sn96.5% Ag3% Cu0.5%  
**Solder Temp:** 245°C ± 5°C  
**Immersion Time:** 4 sec. ± 1 sec.  
**Depth:** Completely cover the termination

### Test Equipment

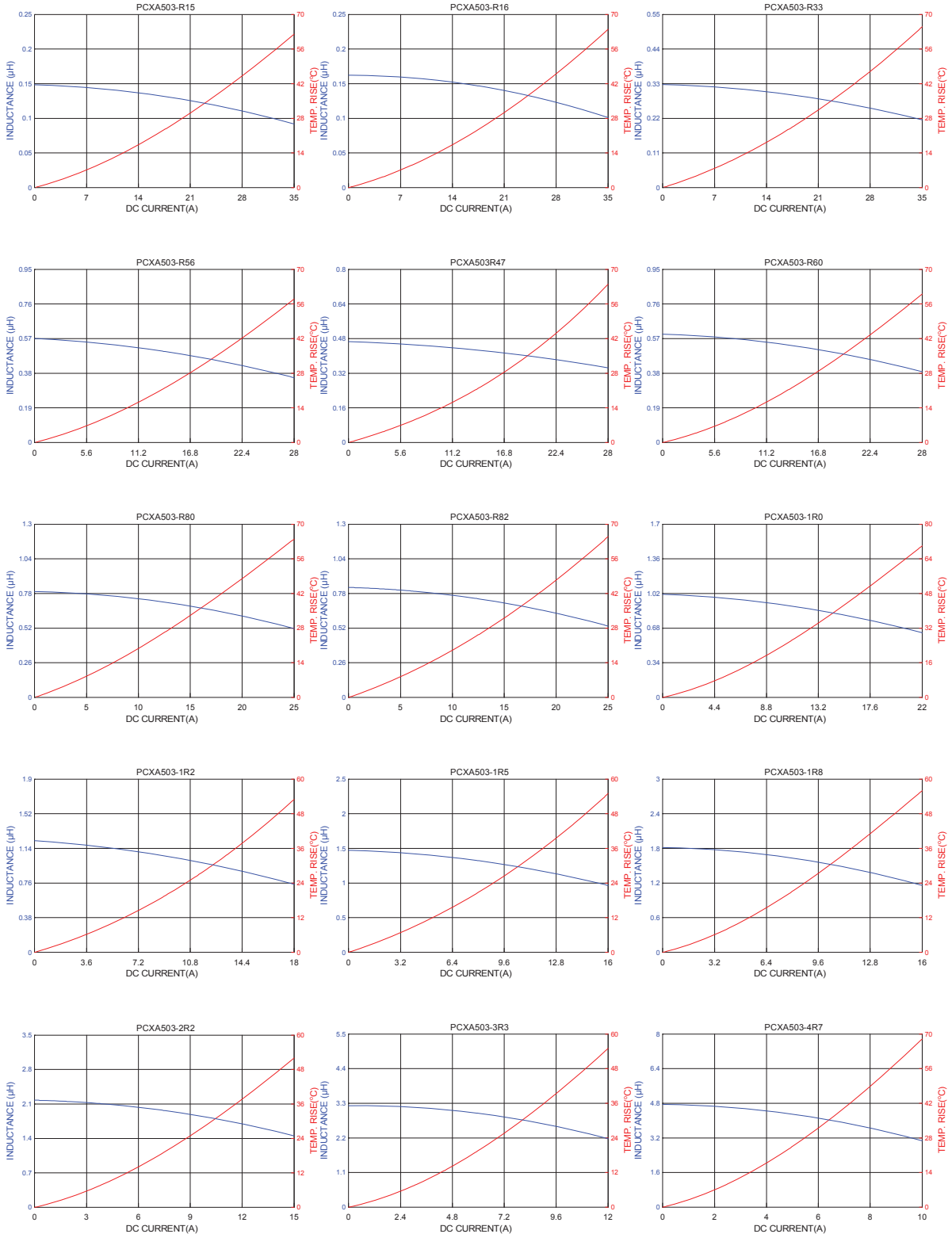
**(L):** HP4284A LCR meter or equivalent  
**DCR:** CH16502, Agilent 33420A Mirco-Ohmmeter

### Physical

**Packaging:** 2000 pieces per 13 inch reel.  
**Marking:** EIA Inductance Code/ Date Code



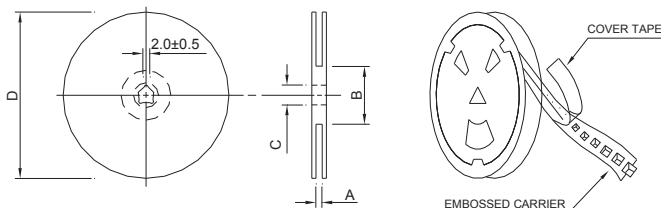
Typical Performance Curves





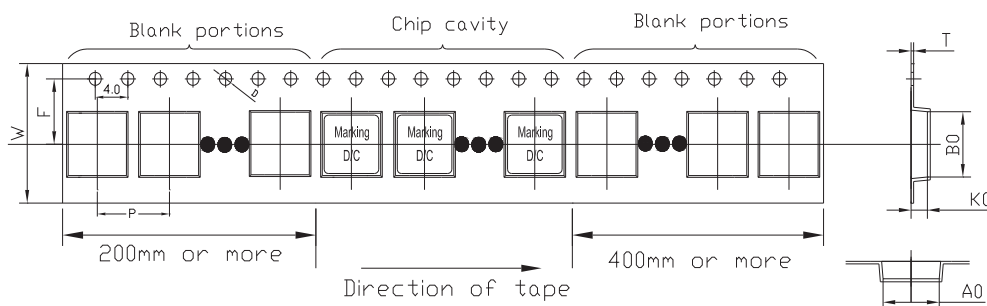
Packaging Information

Reel Dimension



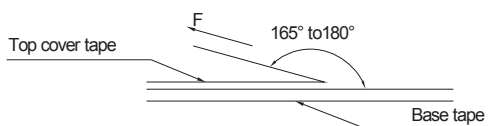
Type	A(mm)	B(mm)	C(mm)	D(mm)
330x12mm	16.4+2/-0	100±2	13+0.5/-0.2	330

Tape Dimension



Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	T(mm)	D(mm)
5.7±0.1	6.0±0.1	2.3±0.1	8.0±0.1	16.0±0.3	7.5±0.1	0.35±0.05	1.5±0.1

Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions(referenced ANSI/EIA-481-D-2008 of 4.11 standard).

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	290~310

Application Notice

- Storage Conditions
  - To maintain the solderability of terminal electrodes:
  - 1. PCXA503 Series meets IPC/JEDEC J-STD-020D standard-MSL, level 1.
  - 2. Temperature and humidity conditions: Less than 40°C and 60% RH.
  - 3. Recommended products should be used within 12 months from the time of delivery.
  - 4. The packaging material should be kept where no chlorine or sulfur exists in the air.
- Transportation
  - 1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
  - 2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
  - 3. Bulk handling should ensure that abrasion and mechanical shock are minimized.