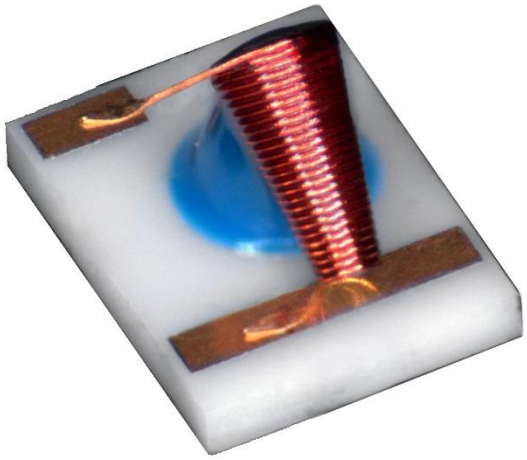
CCM
Broadband Conical Inductor



- Substrate Mounted For Chip & Wire Applications
- Broadband performance to 40 Ghz
- Integrated 50Ω Microstrip
- Low Insertion Loss -.35 dB
- Perfect for Bias Tee Applications

CCM Conical Inductor Specification

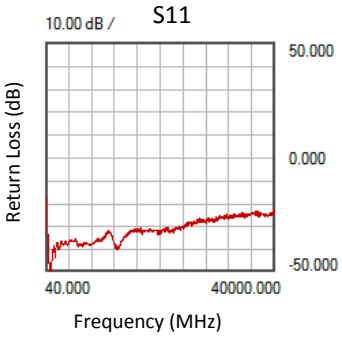
Part Number	L (uH)	I max (mA)	Upper Freq. Limit (GHz) Typ.	Return Loss (dB) Typ.	Insertion Loss (dB) Typ.	Q Typ. @ 10 MHz	DCR Typ (Ohms)	Wire Size (AWG)	Foot Print (L x W) Inch	Figure
CCM19T40-002	.220	700	30	-26	-.35	25-30	.180	40	.080 x .110	A
CCM36T44-001	.600	300	40	-26	-.35	20-25	.650	44	.080 x .110	A
CCM45T47-001	.840	160	40	-26	-.35	25-30	1.60	47	.080 x .110	A
CCM50T40-001	1.65	400	30	-26	-.35	25-30	.625	40	.150 x .200	B
CCM65T42-001	2.85	300	40	-26	-.35	30-35	1.25	42	.150 x .200	B
CCM82T44-001	6.70	180	40	-26	-.35	25-30	2.83	44	.150 x .200	B
CCM110T47-001	8.00	100	40	-26	-.35	25-30	6.55	47	.150 x .200	B

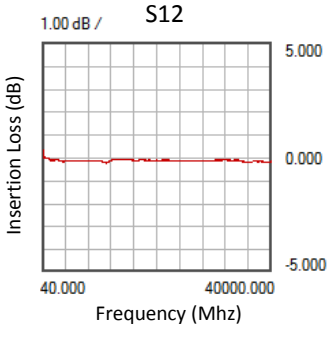
Custom Conical Assemblies available upon request - Contact Piconics for more info.
S-Parameters available @ www.piconics.com/conical-inductors

Environmental:

Operating Temp.	-55°C to +155°C
Storage Temp.	-55°C to +155°C
RoHS Compliant	Yes
Outgas	Meets ASTM E595 (Special Epoxy Required)
FIT Rate	34 SR-332
MSL Rating	1
MTBF	29,695,225 Hours

Frequency Response:





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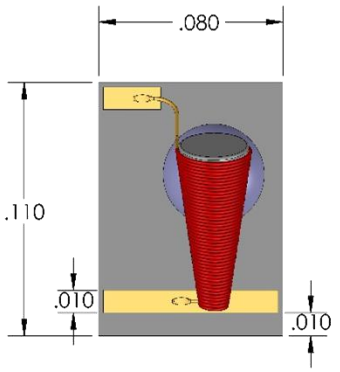
PICONICS
High-Quality Micro-Electronic Inductors

Mechanicals:

Not Drawn To Scale
Dimensions in Inches



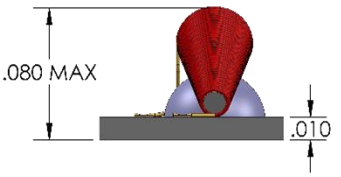
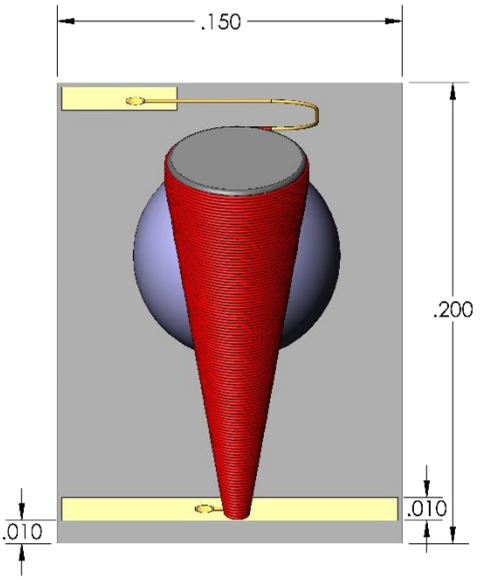


Figure A



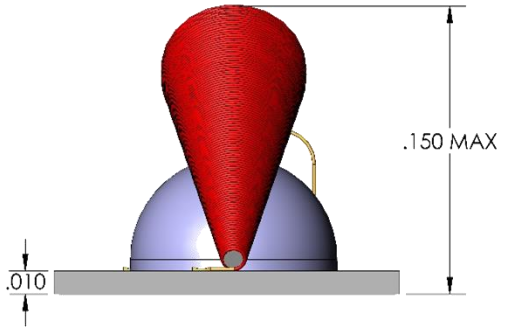


Figure B

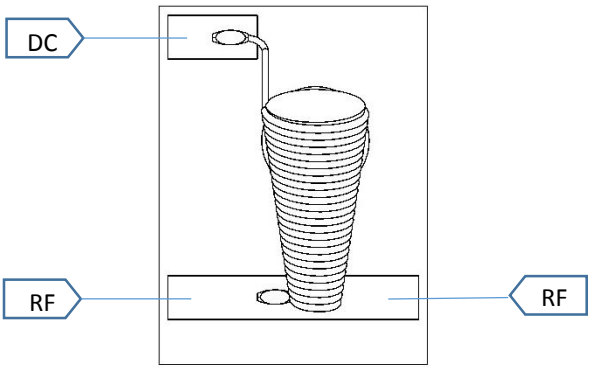
Substrate:

Material	99.6 % Alumina
Metallization – Front side	TiW/Au/Ni/Au
Metallization - Backside	TiW/Au/Ni/Au

Packaging:

Package Type	Gel Pak
Quantity / Pack	50

Mounting:

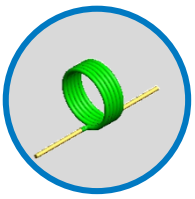


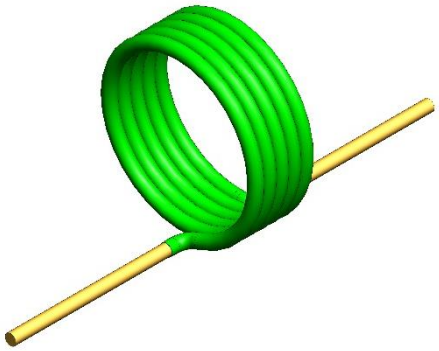
Wire Bond For Connection

Notes:

1. L & Q are measure on an HP 4286A Rf Impedance Analyzer using probes.
2. Idc Max is the DC current at which the device sees a 100°C temperature rise over an ambient temperature of 25°C.
3. Please see “Conical Frequency Range Measurement Document” to see process for determining the inductors frequency range.

MG Series Gold High Frequency Air Coils





- Micro Sized Pure Gold Air Coils
- Inductance Values From 8 nH
- Precision Insulation Removal For Repeatable Mounting
- Extremely Low Insertion Loss
- Perfect for High Frequency Filters

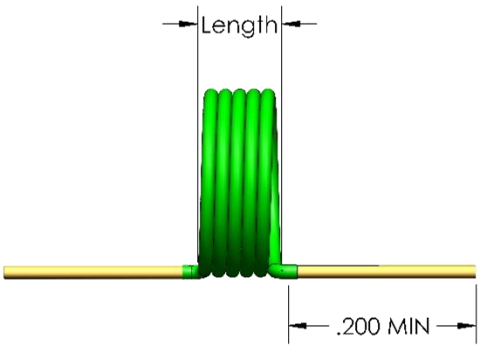
MK Series Inductor Specification

Part Number	L (nH) +/-10%	Q Min	I Max (mA)	SRF Typ. (GHz)	Test Freq. (MHz)	DCR Max (Ohms)	Length Nom. (Inches)	Wire Size (AWG)	Turns
MG3T47.018SXS-00	8	26	100	10.0	200	0.25	0.005	47	3
MG5T47.018SXS-00	15	29	100	9.0	200	0.30	0.010	47	5
MG10T47.018SXS-00	40	23	100	7.5	100	0.50	0.017	47	10
MG15T47.018SXS-00	60	24	100	6.0	100	0.65	0.026	47	15
MG20T47.018SXS-00	95	25	100	4.5	100	0.80	0.034	47	20
MG30T47.018SXS-00	150	17	100	2.5	25	1.10	0.050	47	30

Custom configurations available upon request - Contact Piconics for more info.
***SRF is Typical Performance on 10 mil Alumina**

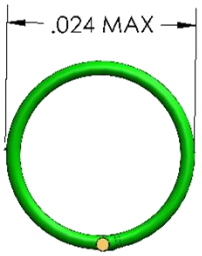
Mechanicals:

Wire	47 Awg 99.9% Gold
Insulation	155°C PolyNylon
Lead Finish	99.9% Gold
Packaging	Individual Pill Capsules



Environmental:

Operating Temp.	-55°C to 125°C
Storage Temp.	-55°C to 125°C
RoHS Compliant	Yes



Not Drawn To Scale
Dimensions in Inches

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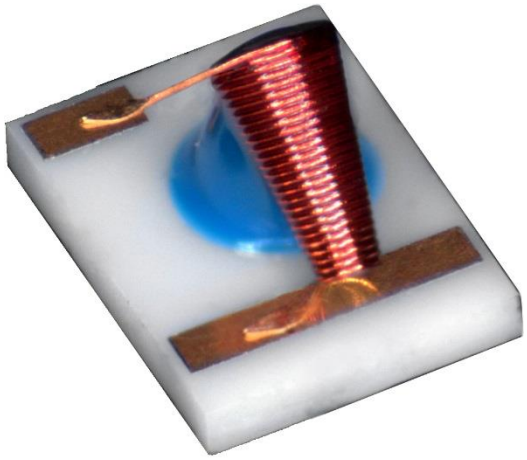
Micro CCM
Broadband Conical Inductor



- Substrate Mounted For Chip & Wire Applications
- Broadband performance to 40 Ghz
- Integrated 50Ω Microstrip
- Low Insertion Loss -.35 dB
- Perfect for Bias Tee Applications

Micro CCM Conical Inductor Specification

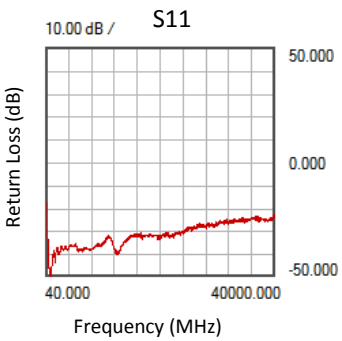
Part Number	L (uH)	I max (mA)	Upper Freq. Limit (GHz) Typ.	Return Loss (dB) Typ.	Insertion Loss (dB) Typ.	Q Typ. @ 10 MHz	DCR Typ (Ohms)	Wire Size (AWG)	Foot Print (L x W) Inch	Figure
CCM7T44-001	.024	500	40	-20	-.35	20-25	.090	44	.060 x .060	A
CCM10T47-003	.070	340	40	-26	-.35	25-30	.390	47	.060 x .060	A
CCM10T40-002	.047	1000	40	-20	-.35	15-20	.070	40	.060 x .060	A
CCM20T44-001	.170	325	40	-20	-.35	22-28	.300	44	.060 x .080	B
CCM24T45-001	.250	275	40	-26	-.35	20-25	.500	45	.060 x .080	B
CCM25T47-003	.250	230	40	-26	-.35	25-30	.800	47	.060 x .080	B

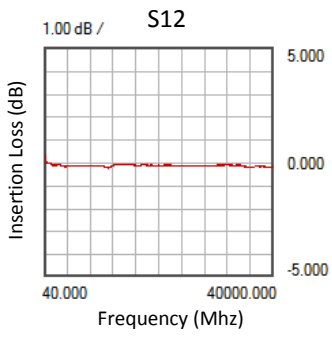
Custom Conical Assemblies available upon request - Contact Piconics for more info.
S-Parameters available @ www.piconics.com/conical-inductors

Environmental:

Operating Temp.	-55°C to +155°C
Storage Temp.	-55°C to +155°C
RoHS Compliant	Yes
Outgas	Meets ASTM E595 (Special Epoxy Required)
FIT Rate	34 SR-332
MSL Rating	1
MTBF	29,695,225 Hours

Frequency Response:





Mechanicals:

Not Drawn To Scale
Dimensions in Inches

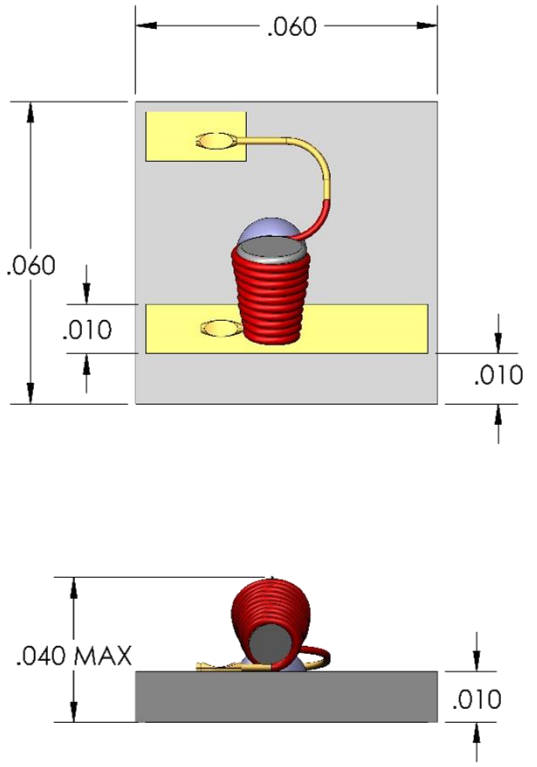


Figure: A

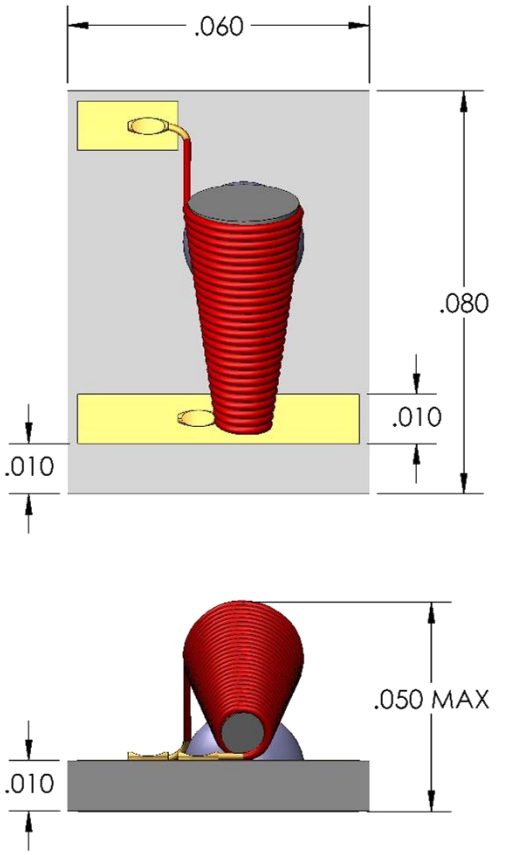
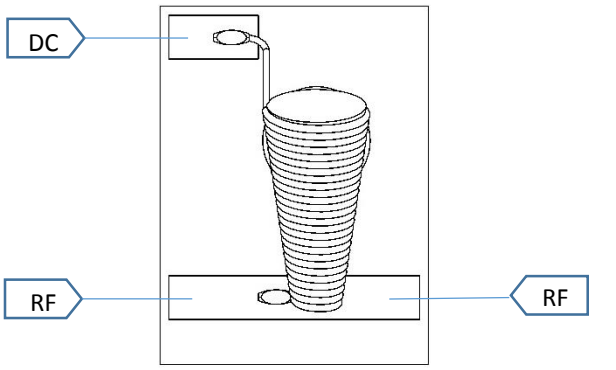


Figure: B

Substrate:

Material	99.6 % Alumina
Metallization - Front side	TiW/Au/Ni/Au
Metallization - Backside	TiW/Au/Ni/Au

Mounting:



Wire Bond For Connection

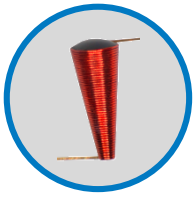
Packaging:

Package Type	Gel Pak
Quantity / Pack	50

Notes:

1. L & Q are measured on an HP 4286A Rf Impedance Analyzer using probes.
2. Idc Max is the DC current at which the device sees a 100°C temperature rise over an ambient temperature of 25°C.
3. Please see “Conical Frequency Range Measurement Document” to see process for determining the inductors frequency range.

Micro Series
Broadband Conical Inductor



Features

- Broadband width past 40 GHz
- Low Inductance with current handling up to 800 mA
- Micro – size for small packages
- Low Insertion loss across band (<-0.35 dB Typical)

Micro Series Conical Inductor Specification

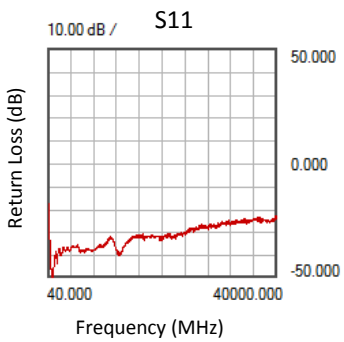
Part Number	L (uH)	I max (mA)	Upper Freq. Limit (GHz) Typ.	Return Loss (dB) Typ.	Insertion Loss (dB) Typ.	Q Typ. @ 10 MHz	DCR Typ (Ohms)	Foot Print (OD x L) Inch
CC7T40K240G5	.024	800	40+	-18	-.35	10-15	.090	.035 x .035
CC7T44K240G5	.024	500	40+	-20	-.35	20-25	.090	.025 x .025
CC10T40K240G5	.047	1300	40+	-20	-.35	15-20	.070	.030 x .045
CC10T47K240G5	.070	340	40+	-26	-.35	25-30	.390	.023 x .025
CC15T47K240G5	.095	250	40+	-20	-.35	10-15	.450	.030 x .035
CC20T44K240G5	.170	325	40+	-20	-.35	22-28	.300	.030 x .055
CC24T45K240G5	.250	375	40+	-26	-.35	20-25	.500	.030 x .055
CC25T44K240G5	.250	300	40+	-26	-.35	22-28	.500	.035 x .070
CC25T47K240G5	0.250	230	40+	-26	-.35	25-30	.800	.025 x .050

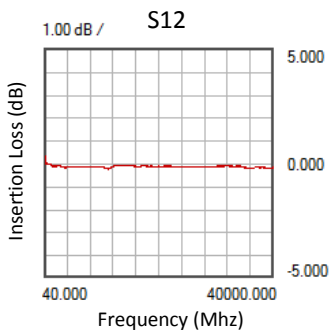
Custom conicals available upon request - Contact Piconics for more info.
S-Parameters available @ www.piconics.com/conical-inductors

Environmental:

Operating Temp.	-55°C to +155°C
Storage Temp.	-55°C to +155°C
RoHS Compliant	Yes
Outgas	Meets ASTM E595
FIT Rate	34 SR-332
MSL Rating	1
MTBF	29,695,225 Hours

Frequency Response:





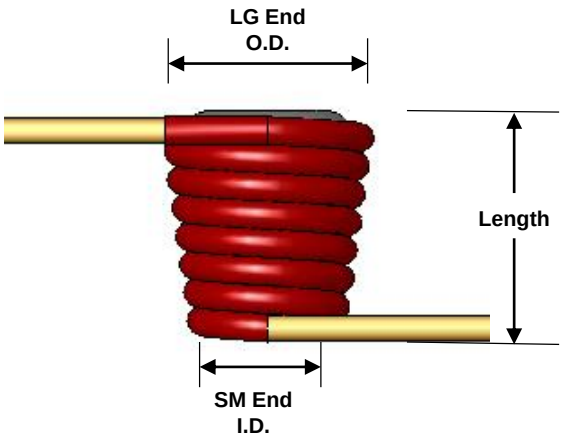
PICONICS
High-Quality Micro-Electronic Inductors

Micro Series Conical Inductor Specification

Part Number	Turns	Wire AWG	Length Inches [mm]	LG End O.D. Inches [mm]	SM End I.D. Inches [mm]	Lead Finish	Insulation Color
CC7T40K240G5	7	40	.035 [.89]	.035 [.89]	.008 [.20]	5-10 µin Au	Red
CC7T44K240G5	7	44	.025 [.64]	.025 [.64]	.008 [.20]	5-10 µin Au	Green
CC10T40K240G5	10	40	.045 [1.14]	.035 [.89]	.008 [.20]	5-10 µin Au	Red
CC10T47K240G5	10	47	.025 [.64]	.023 [.58]	.008 [.20]	5-10 µin Au	Red
CC15T47K240G5	15	47	.030 [.76]	.035 [.89]	.008 [.20]	5-10 µin Au	Red
CC20T44K240G5	20	44	.055 [1.40]	.030 [.76]	.008 [.20]	5-10 µin Au	Green
CC24T45K240G5	24	45	.055 [1.40]	.030 [.76]	.008 [.20]	5-10 µin Au	Red
CC25T44K240G5	25	44	.070 [1.78]	.035 [.89]	.008 [.20]	5-10 µin Au	Green
CC25T47K240G5	25	47	.050 [1.27]	.025 [.64]	.008 [.20]	5-10 µin Au	Red

Custom conicals available upon request - Contact Piconics for more info.
S-Parameters available @ www.piconics.com/conical-inductors

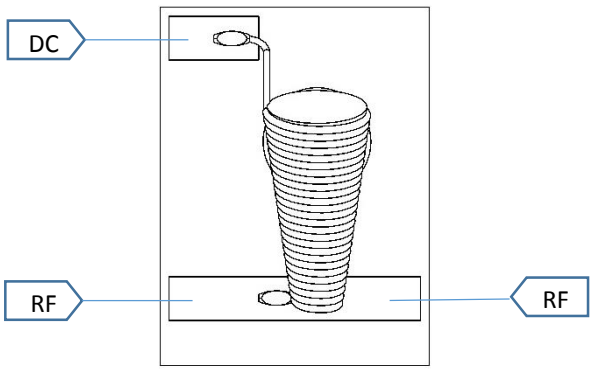
Mechanicals:



- Lead length is 0.200 inches MIN
- Insulation stripped within .050 of coil at large end
- Insulation stripped to coil body at small end

Not Drawn To Scale

Mounting:



Orient Small End
Towards RF Signal

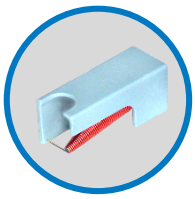
Packaging:

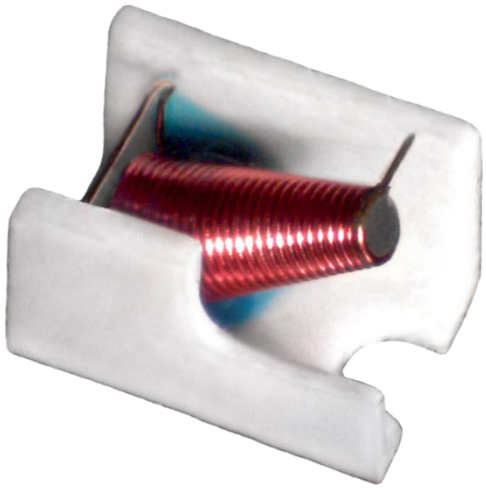
Package Type	Gel Pak
Quantity / Pack	100

Notes:

1. L & Q are measure on an HP 4191A Rf Impedance Analyzer using a 16092A Spring Clip Fixture.
2. Idc Max is the DC current at which the device sees a 100°C temperature rise over an ambient temperature of 25°C.
3. Please see “Conical Frequency Range Measurement Document” to see process for determining the inductors frequency range.
4. Please see “Mounting Instructions” in our application data section of our website for additional mounting instructions.

Micro SMT Broadband Conical Inductor





- Smallest SMT Conical Available
- Broadband performance to 65+ Ghz
- SMT style for volume manufacturing
- Low insertion loss -.35 dB
- Perfect for Fiber-Optic Applications

Micro SMT Conical Inductor Specification

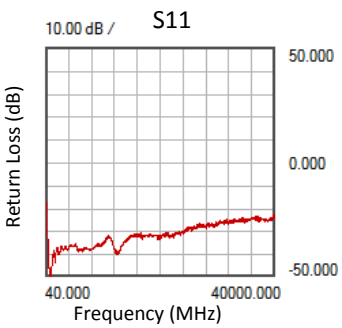
Part Number	L (uH)	I max (mA)	Upper Freq. Limit (GHz) Typ.	Return Loss (dB) Typ.	Insertion Loss (dB) Typ.	Q Typ. @ 10 MHz	DCR Typ (Ohms)	Wire Size (AWG)	Foot Print (L x W) Inch	Carrier Color
CC20T44K240G5-C	.170	325	65+	-20	-.35	22-28	0.300	44	.040 x .060	Tan
CC25T47K240G5-C	.250	230	65+	-26	-.35	25-30	0.800	47	.040 x .060	Blue

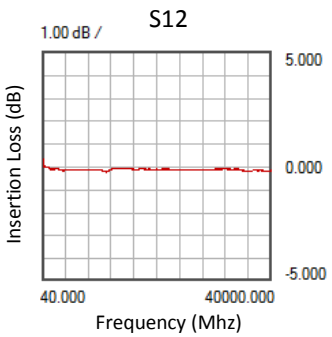
Custom conicals available upon request - Contact Piconics for more info.
S-Parameters available @ www.piconics.com/conical-inductors

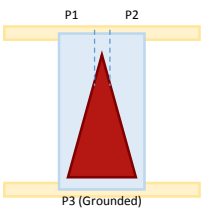
Environmental:

Operating Temp.		-55°C to +155°C
Storage Temp.		-55°C to +155°C
RoHS Compliant		Yes
Outgas		Meets ASTM E595 (Special Epoxy Required)
FIT Rate		34 SR-332
MSL Rating		1
MTBF		29,695,225 Hours
Soldering:	Max Temp	260°C
	Max # Reflow	3
	Max Time	10 seconds

Frequency Response:







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Equivalent circuit models

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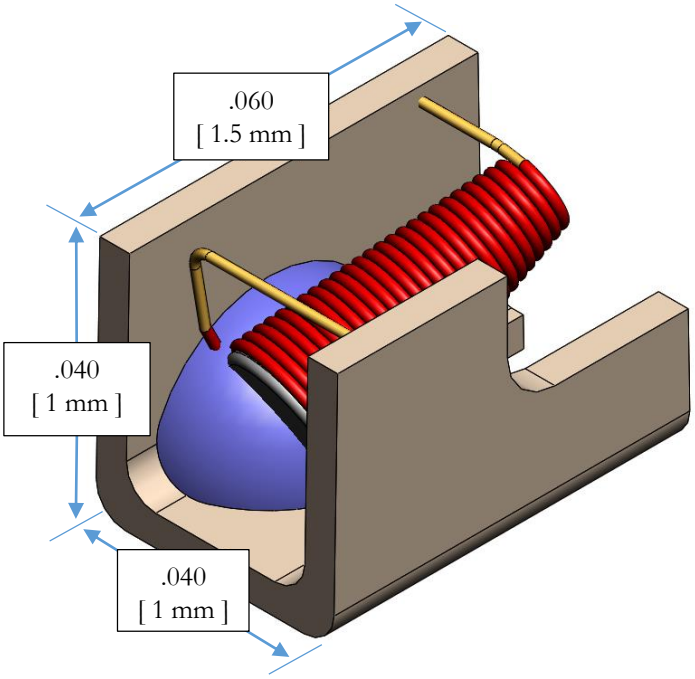
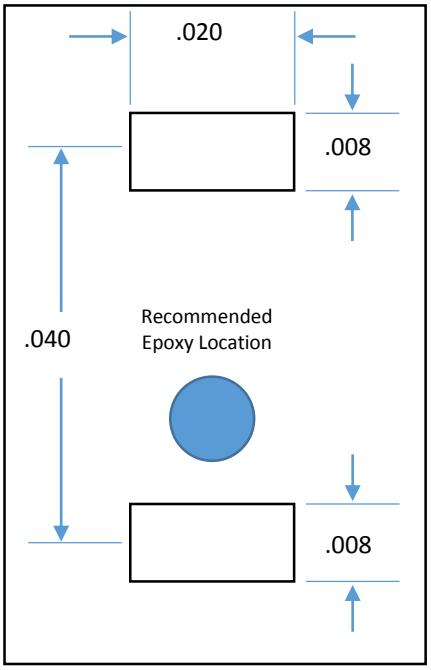
Mechanicals:

Not Drawn To Scale
Dimensions in Inches



Recommended Foot Print:

* See "Mounting Instructions" on our website for additional mounting instructions. *

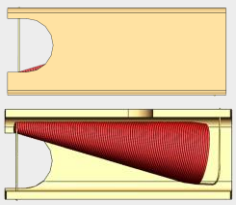


Tape & Reel Specs:

Part #	CC20T44K240G5-C CC25T47K240G5-C
Qty. Per Reel	1000 MAX/ Reel
Tape Width	8 mm
Pocket Pitch	4.0 mm
Outside Reel Diameter	180 mm

Alignment notch denotes small end of coil.

Top View

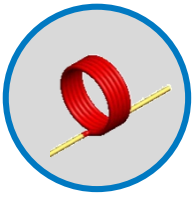


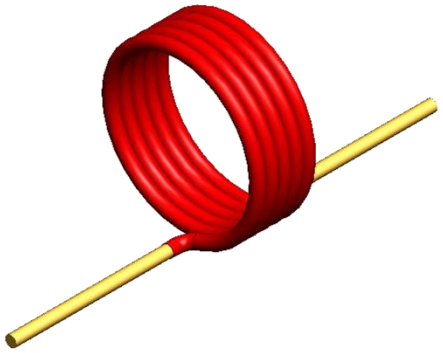
Bottom View

Notes:

1. L & Q are measure on an HP 4191A Rf Impedance Analyzer using a 16092A Spring Clip Fixture.
2. Idc Max is the DC current at which the device sees a 100°C temperature rise over an ambient temperature of 25°C.
3. Please see "Conical Frequency Range Measurement Document" to see process for determining the inductors frequency range.
4. Please see "Mounting Instructions" in our application data section of our website for additional mounting instructions.

MK Series Copper High Frequency Air Coils





- Micro Sized Gold Plated Copper Air Coils
- Inductance Values From 8 nH
- Precision Insulation Removal For Repeatable Mounting
- Extremely Low Insertion Loss
- Perfect for High Frequency Filters

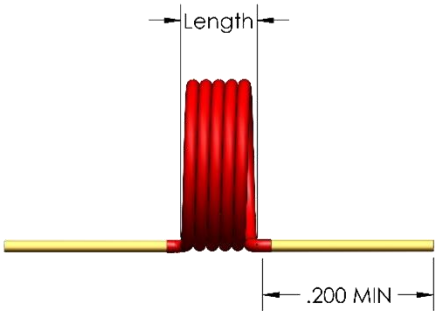
MK Series Inductor Specification

Part Number	L (nH) +/-10%	Q Min	I Max (mA)	SRF Typ. (GHz)	Test Freq. (MHz)	DCR Max (Ohms)	Length Nom. (Inches)	Wire Size (AWG)	Turns
MK3T47.018HXS-00	8	26	100	10.0	200	0.25	0.005	47	3
MK5T47.018HXS-00	15	29	100	9.0	200	0.30	0.010	47	5
MK10T47.018HXS-00	35	23	100	7.5	100	0.50	0.017	47	10
MK15T47.018HXS-00	60	24	100	6.0	100	0.65	0.026	47	15
MK20T47.018HXS-00	85	25	100	4.5	100	0.80	0.034	47	20
MK30T47.018HXS-00	140	17	100	2.5	25	1.10	0.050	47	30

Custom configurations available upon request - Contact Piconics for more info.
***SRF is Typical Performance on 10 mil Alumina**

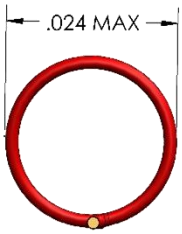
Mechanicals:

Wire	47 Awg Copper
Insulation	240°C Polyimide-Amide
Lead Finish	5-10 Micro Inch Gold Plate
Packaging	Individual Pill Capsules



Environmental:

Operating Temp.	-55°C to 125°C
Storage Temp.	-55°C to 125°C
RoHS Compliant	Yes



Not Drawn To Scale
Dimensions in Inches

www.piconics.com
ISO 9001:2008 RoHs Compliant
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