



Thin-Film RF/Microwave Directional Couplers

CP0805 High Directivity SMD Type

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General Information



GENERAL DESCRIPTION

The ITF SMD Coupler is based on thin-film multilayer technology. The technology provides a miniature part with excellent high frequency performance and rugged construction for reliable automatic assembly.

The ITF Coupler is offered in a variety of frequency bands compatible with various types of high frequency wireless systems.

APPLICATIONS

- 4G LTE
- 5G LTE
- Base Stations.
- Automotive
- Industrial
- Mobile Communications
- Satellite TV Receivers
- GPS
- Vehicle Location Systems
- Wireless LAN's

FEATURES

- Miniature Size: 0805
- Inherent Low Profile
- Self Alignment During Reflow
- Excellent Solderability
- Low Parasitics
- RoHS Compliant
- Better Heat Dissipation
- Operating / Storage Temp.: -40°C to +85°C
- Power Rating: 5W RF CW

HOW TO ORDER

CP	0805	X	****	X	S	TR
Style	Size	Type	Frequency MHz	Sub-Type	Termination Code	Packaging Code
Directional Coupler	0603				W = LGA Sn90, Pb10 **S= LGA Sn100	TR = Tape and Reel
Not RoHS Compliant						



For RoHS compliant products, please select correct termination style.

QUALITY INSPECTION

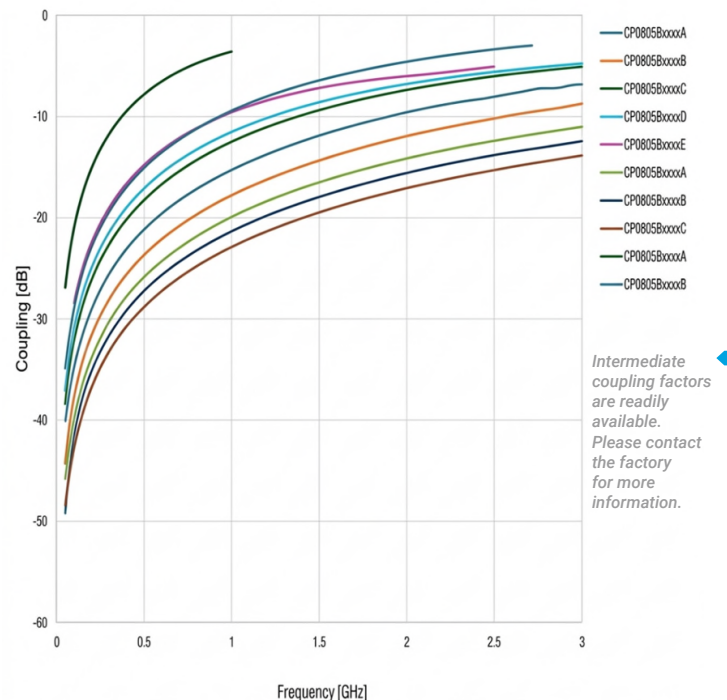
Finished parts are 100% tested for electrical parameters and visual characteristics. Each production lot is evaluated on a sample basis for:

- Static Humidity: 85°C, 85% RH, 160 hours
- Endurance: 125°C, I_R , 4 hours

TERMINATION

Sn90 Pb10 or Lead-Free Sn100 Nickel/Solder coating compatible with automatic soldering technologies: reflow, wave soldering, vapor phase, and manual.

CP0805 - TYPE SELECTION CHART



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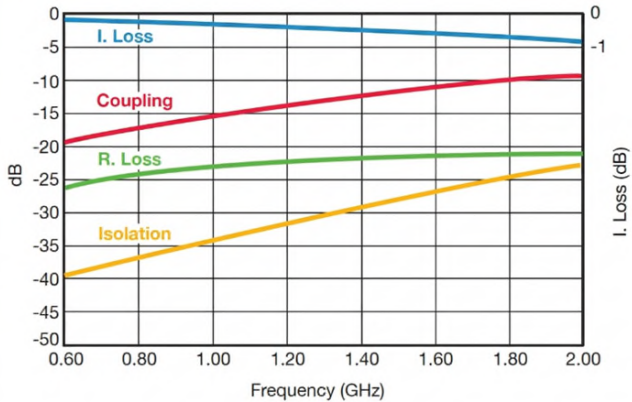
CP0805AxxxxASTR



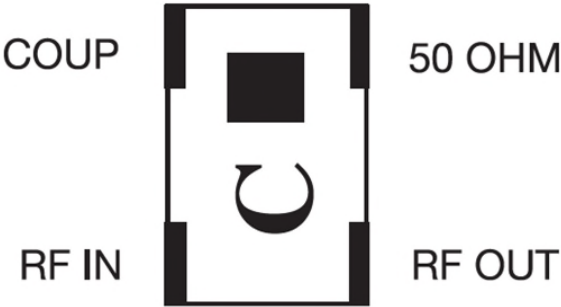
Coupler P/N CP0805AxxxxASTR

P/N Examples*	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	R. Loss max. [dB]
CP0805A0836ASTR	824 - 849	-16.5±1	-0.25	-21
CP0805A0881ASTR	869 - 894	-16±1	-0.25	-21
CP0805A0902ASTR	890 - 915	-16±1	-0.25	-21
CP0805A0947ASTR	935 - 960	-15.5±1	-0.25	-21
CP0805A0897ASTR	880 - 915	-16±1	-0.25	-21
CP0805A0942ASTR	925 - 960	-15.5±1	-0.25	-21
CP0805A1441ASTR	1429 - 1453	-12±1	-0.5	-17
CP0805A1747ASTR	1710 - 1785	-10.5±1	-0.7	-16
CP0805A1842ASTR	1805 - 1880	-10±1	-0.8	-16
CP0805A1880ASTR	1850 - 1910	-9.5±1	-0.8	-16
CP0805A1960ASTR	1930 - 1990	-9.5±1	-0.8	-16
CP0805A1907ASTR	1895 - 1920	-9.5±1	-0.8	-16
CP0805A1890ASTR	1880 - 1900	-9.5±1	-0.8	-16

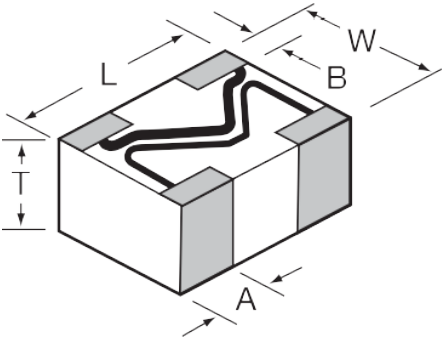
Important: Couplers can be used at any frequency within the indicated range.



TERMINALS (TOP VIEW)

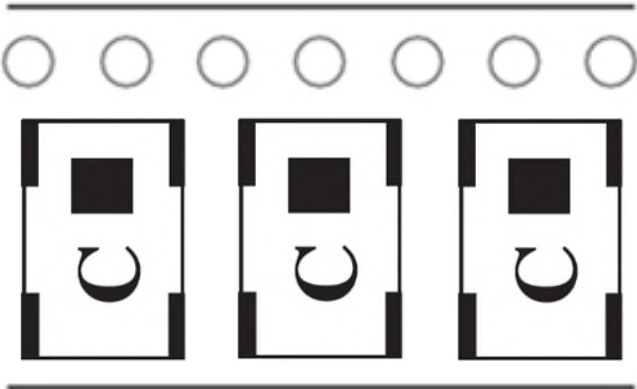


DIMENSIONS: millimeters (inches) (Bottom View)

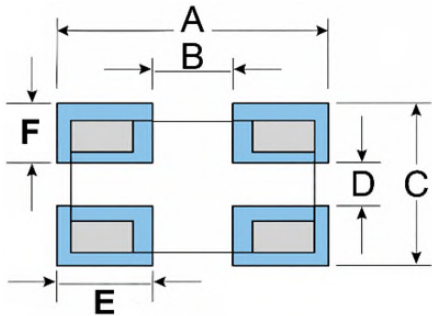


L	2.03±0.1 (0.080±0.004)
W	1.55±0.1 (0.061±0.004)
T	0.98±0.1 (0.039±0.004)
A	0.56±0.25 (0.022±0.020)
B	0.35±0.15 (0.015±0.006)

ORIENTATION IN TAPE



RECOMMENDED PAD LAYOUT DIMENSIONS: millimeters (inches)



A	1.85±0.05 (0.073±0.002)
B	0.45±0.05 (0.018±0.002)
C	1.08±0.05 (0.043±0.002)
D	0.28±0.05 (0.011±0.002)
E	0.70±0.05 (0.028±0.002)
F	0.40±0.05 (0.016±0.002)

*The recommended distance to the PCB Ground Plane is 0.254mm (0.010")

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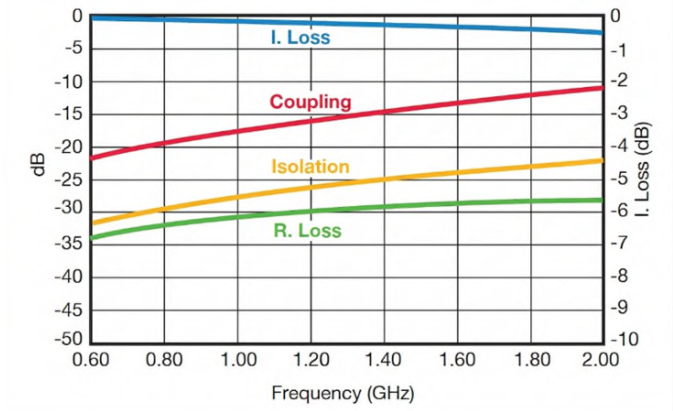
CP0805AxxxxBSTR



Coupler P/N CP0805AxxxxBSTR

P/N Examples*	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	R. Loss max. [dB]
CP0805A0836BSTR	824 - 849	-19±1	-0.25	-21
CP0805A0881BSTR	869 - 894	-18.5±1	-0.25	-21
CP0805A0902BSTR	890 - 915	-18±1	-0.25	-21
CP0805A0947BSTR	935 - 960	-18±1	-0.25	-21
CP0805A0897BSTR	880 - 915	-18.5±1	-0.25	-21
CP0805A0942BSTR	925 - 960	-18±1	-0.25	-21
CP0805A1441BSTR	1429 - 1453	-14.5±1	-0.35	-21
CP0805A1747BSTR	1710 - 1785	-12.5±1	-0.5	-16
CP0805A1842BSTR	1805 - 1880	-12.5±1	-0.5	-16
CP0805A1880BSTR	1850 - 1910	-12±1	-0.6	-16
CP0805A1960BSTR	1930 - 1990	-11.5±1	-0.7	-16
CP0805A1907BSTR	1895 - 1920	-12±1	-0.6	-16
CP0805A1890BSTR	1880 - 1900	-12±1	-0.6	-16
CP0805A2442BSTR	2400 - 2484	-10±1	-0.9	-16

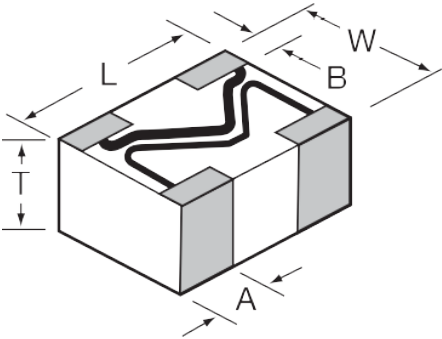
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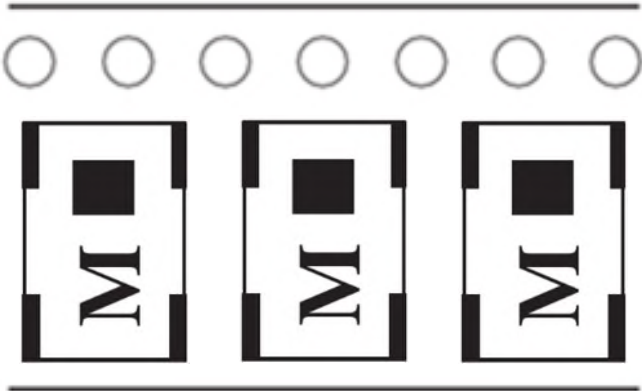


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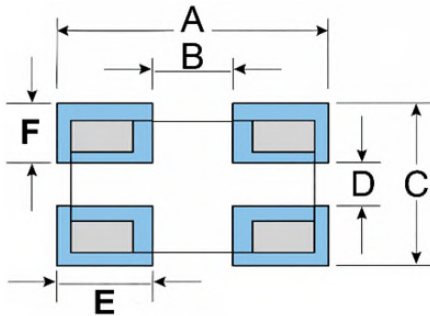


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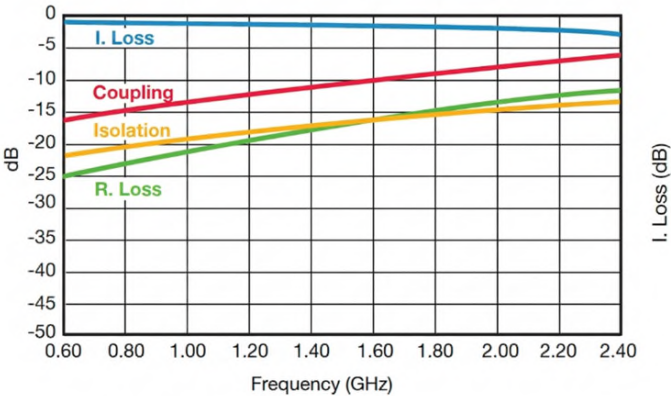
CP0805AxxxxCSTR



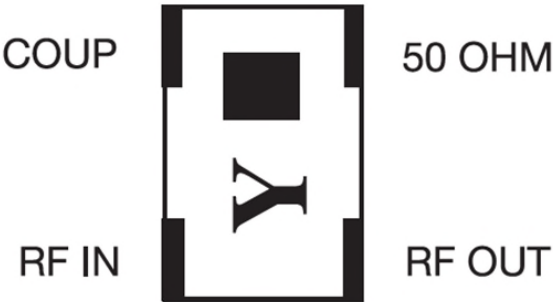
Coupler P/N CP0805AxxxxCSTR

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CP0805A0836CSTR	824 - 849	-14±1	-0.5	-16
CP0805A0881CSTR	869 - 894	-13.5±1	-0.5	-16
CP0805A0902CSTR	890 - 915	-13.5±1	-0.5	-16
CP0805A0947CSTR	935 - 960	-13±1	-0.5	-16
CP0805A0897CSTR	880 - 915	-13.5±1	-0.5	-16
CP0805A0942CSTR	925 - 960	-13±1	-0.5	-16
CP0805A1441CSTR	1429 - 1453	-9.5±1	-1.15	-11
CP0805A1747CSTR	1710 - 1785	-8±1	-1.6	-9
CP0805A1842CSTR	1805 - 1880	-8±1	-1.6	-9
CP0805A1880CSTR	1850 - 1910	-7.5±1	-1.75	-9
CP0805A1960CSTR	1930 - 1990	-7.5±1	-1.75	-9
CP0805A1907CSTR	1895 - 1920	-7.5±1	-1.75	-9
CP0805A1890CSTR	1880 - 1900	-7.5±1	-1.75	-9
CP0805A2442CSTR	2400 - 2484	-6±1	-2.5	-9

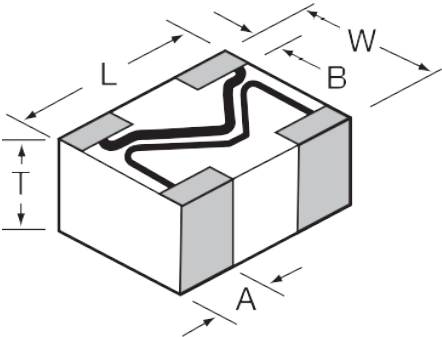
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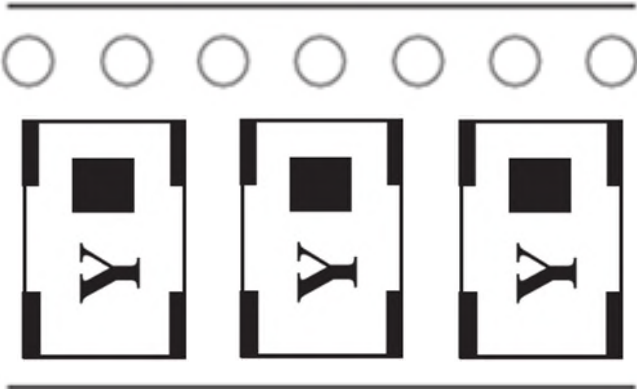


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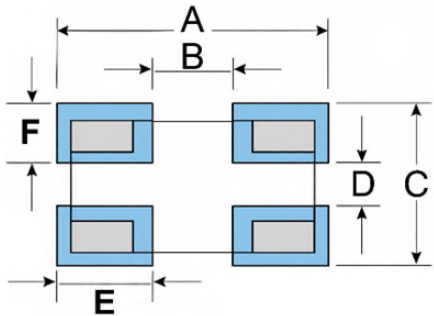


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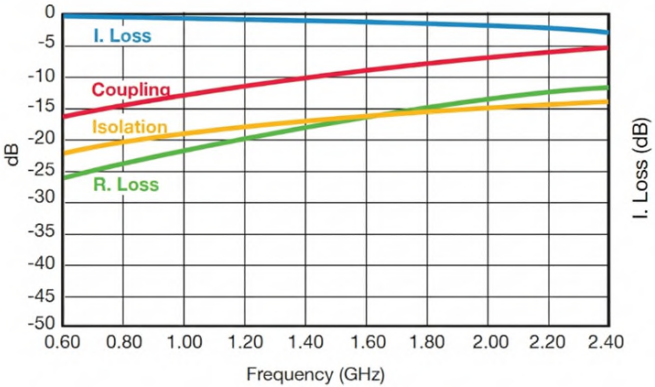
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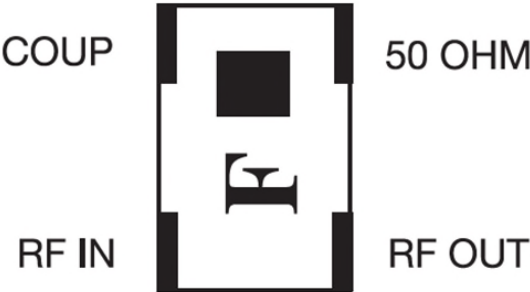
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CP0805A1441DSTR	1429 - 1453	-8.5±1	-1.25	-11
CP0805A1747DSTR	1710 - 1785	-7±1	-1.85	-11
CP0805A1842DSTR	1805 - 1880	-7±1	-1.85	-11
CP0805A1880DSTR	1850 - 1910	-7±1	-1.85	-11
CP0805A1960DSTR	1930 - 1990	-6.5±1	-2.15	-9
CP0805A1907DSTR	1895 - 1920	-6.5±1	-2.15	-9
CP0805A1890DSTR	1880 - 1900	-7±1	-1.85	-11
CP0805A2442DSTR	2400 - 2484	-5.5±1	-2.4	-9

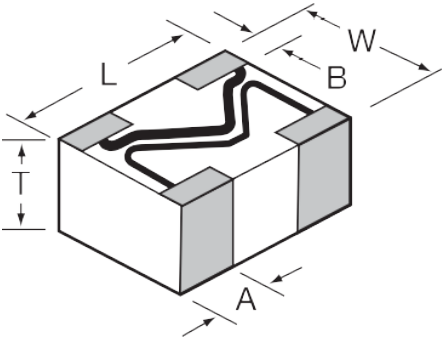
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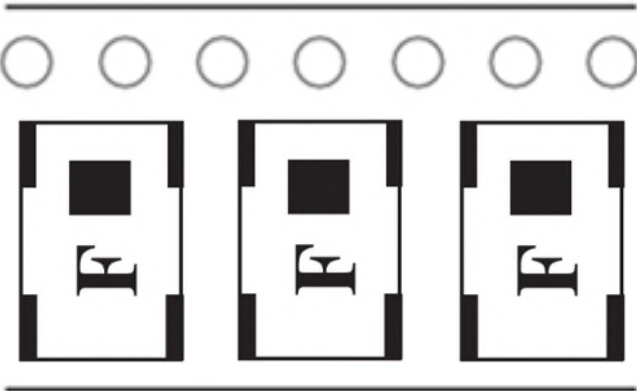


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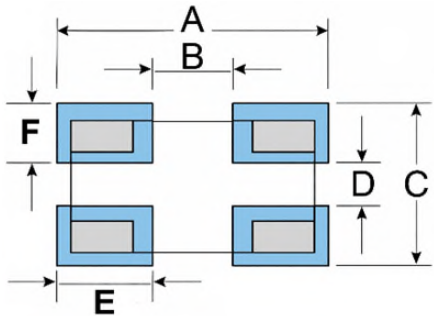


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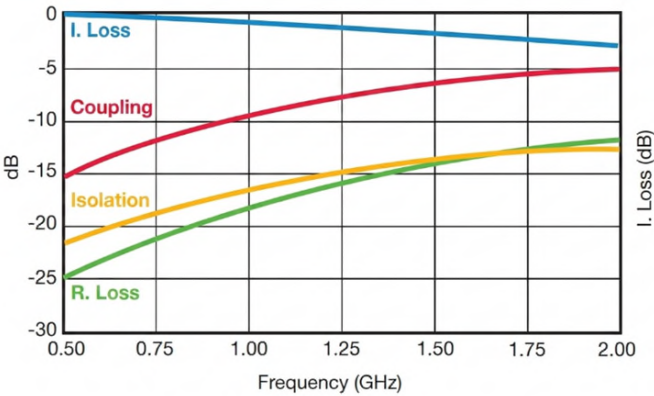
CP0805AxxxxESTR



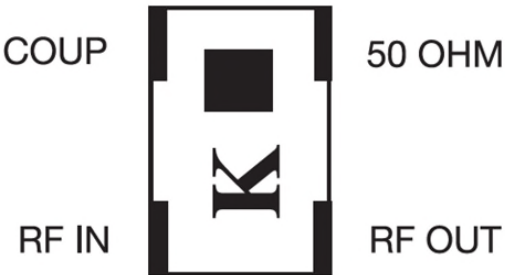
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CP0805A0836ESTR	824 - 849	-11±1	-0.85	-16
CP0805A0881ESTR	869 - 894	-10.5±1	-0.85	-16
CP0805A0902ESTR	890 - 915	-10.5±1	-0.85	-16
CP0805A0947ESTR	935 - 960	-10±1	-0.85	-16
CP0805A0897ESTR	880 - 915	-10.5±1	-0.85	-16
CP0805A0942ESTR	925 - 960	-10±1	-0.85	-16
CP0805A1441ESTR	1429 - 1453	-7±1	-1.8	-11
CP0805A1747ESTR	1710 - 1785	-5.5±1	-2.7	-9
CP0805A1842ESTR	1805 - 1880	-5.5±1	-2.7	-9
CP0805A1880ESTR	1850 - 1910	-5±1	-3.15	-8
CP0805A1960ESTR	1930 - 1990	-5±1	-3.15	-8
CP0805A1907ESTR	1895 - 1920	-5±1	-3.15	-8
CP0805A1890ESTR	1880 - 1900	-5±1	-3.15	-8
CP0805A2442ESTR	2400 - 2484	-4±1	-4.2	-8

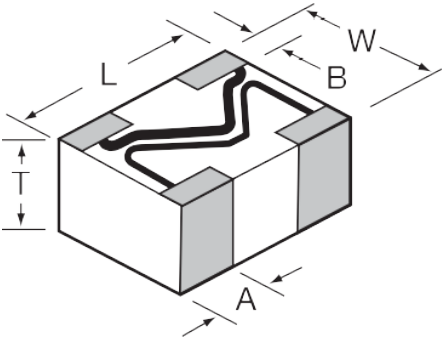
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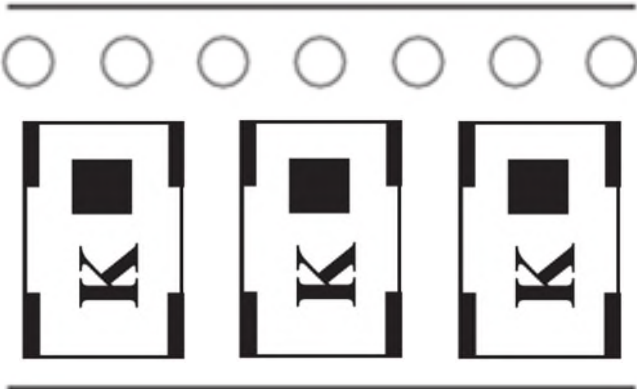


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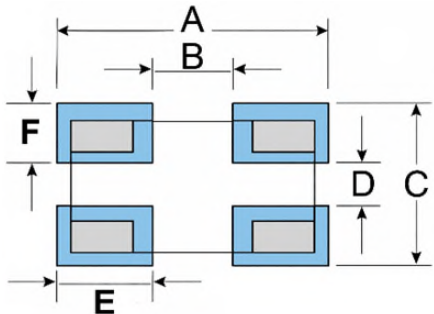


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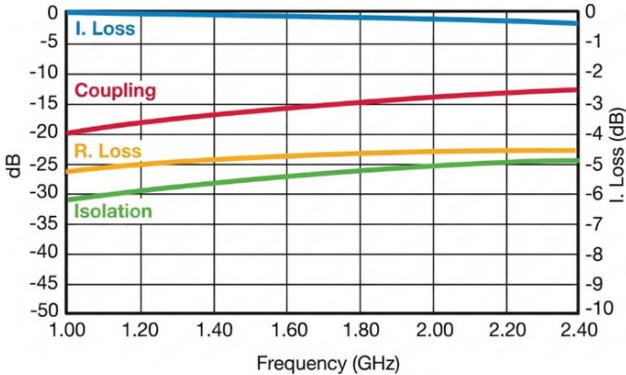
CP0805BxxxxASTR



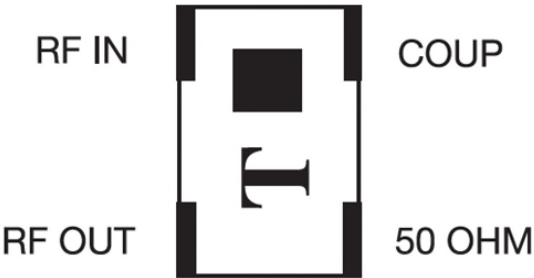
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CP0805B1747ASTR	1710 - 1785	-15.5±1	-0.25	-21
CP0805B1842ASTR	1805 - 1880	-15.5±1	-0.3	-21
CP0805B1880ASTR	1850 - 1910	-15±1	-0.3	-21
CP0805B1960ASTR	1930 - 1990	-14.5±1	-0.4	-21
CP0805B1907ASTR	1895 - 1920	-15±1	-0.3	-21
CP0805B1890ASTR	1880 - 1900	-15±1	-0.3	-21
CP0805B2442ASTR	2400 - 2484	-15±1	-0.4	-21

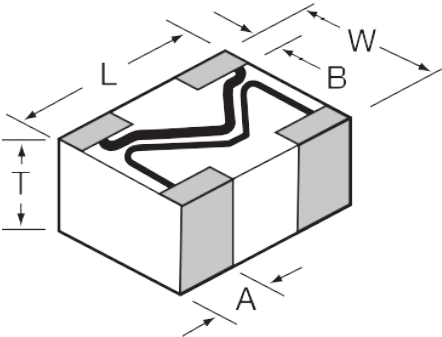
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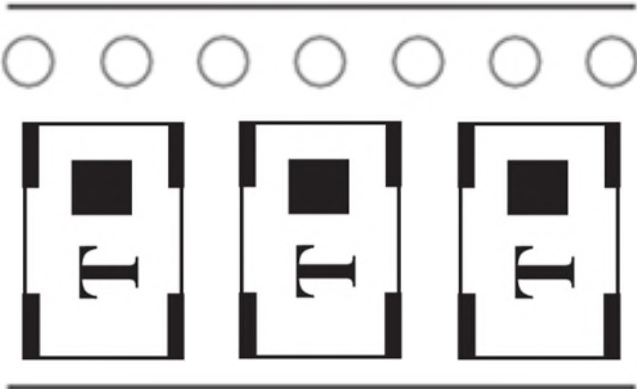


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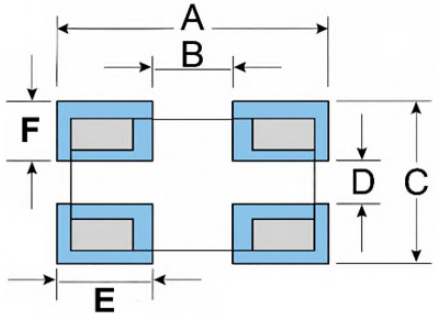


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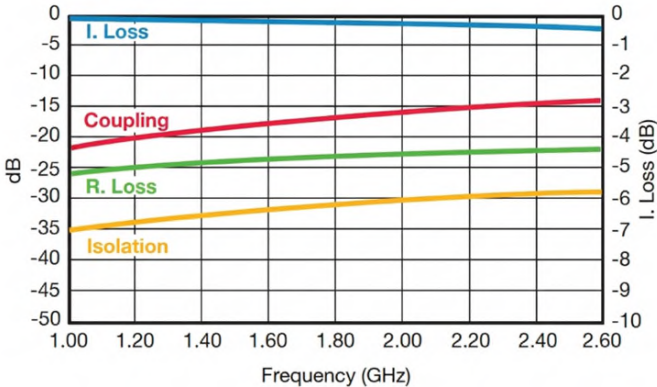
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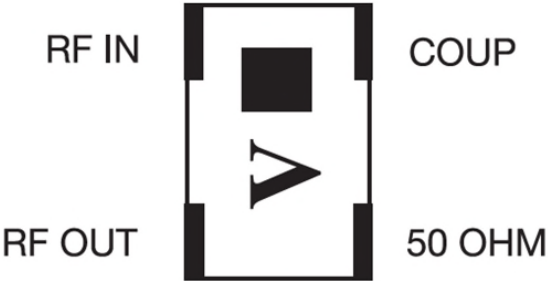
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CP0805B0902BSTR	890 - 915	-22.5±1	-0.25	-21
CP0805B0947BSTR	935 - 960	-22±1	-0.25	-21
CP0805B0897BSTR	880 - 915	-23±1	-0.25	-21
CP0805B0942BSTR	925 - 960	-22±1	-0.25	-21
CP0805B1441BSTR	1429 - 1453	-18.5±1	-0.25	-21
CP0805B1747BSTR	1710 - 1785	-17±1	-0.25	-21
CP0805B1842BSTR	1805 - 1880	-16.5±1	-0.25	-21
CP0805B1880BSTR	1850 - 1910	-16.5±1	-0.25	-21
CP0805B1960BSTR	1930 - 1990	-16±1	-0.25	-21
CP0805B1907BSTR	1895 - 1920	-16±1	-0.25	-21
CP0805B1890BSTR	1880 - 1900	-16±1	-0.25	-21
CP0805B2442BSTR	2400 - 2484	-14±1	-0.4	-21

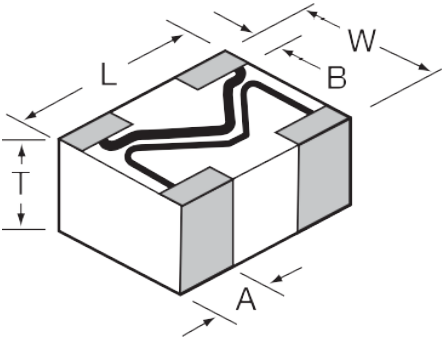
Important: Couplers can be used at any frequency within the indicated range.



TERMINALS (TOP VIEW)

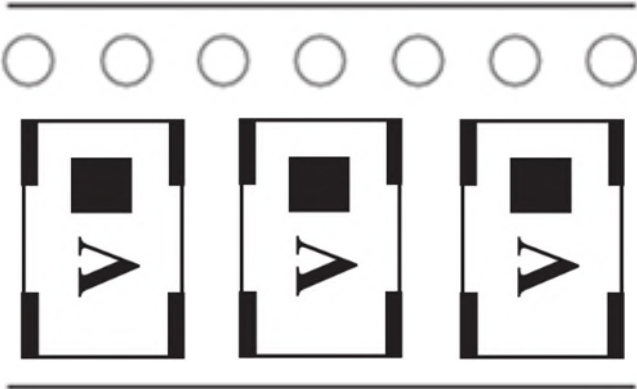


DIMENSIONS: millimeters (inches) (Bottom View)

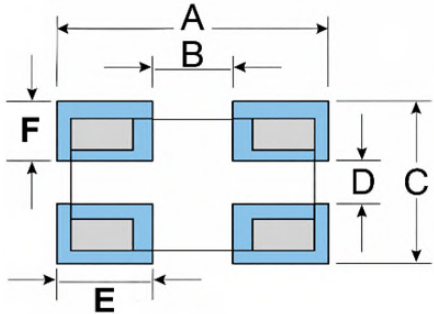


L	2.03±0.1 (0.080±0.004)
W	1.55±0.1 (0.061±0.004)
T	0.98±0.1 (0.039±0.004)
A	0.56±0.25 (0.022±0.020)
B	0.35±0.15 (0.015±0.006)

ORIENTATION IN TAPE



RECOMMENDED PAD LAYOUT DIMENSIONS: millimeters (inches)



A	1.85±0.05 (0.073±0.002)
B	0.45±0.05 (0.018±0.002)
C	1.08±0.05 (0.043±0.002)
D	0.28±0.05 (0.011±0.002)
E	0.70±0.05 (0.028±0.002)
F	0.40±0.05 (0.016±0.002)

*The recommended distance to the PCB Ground Plane is 0.254mm (0.010")

Thin-Film RF/Microwave Directional Couplers

CP0805 High Directivity SMD Type

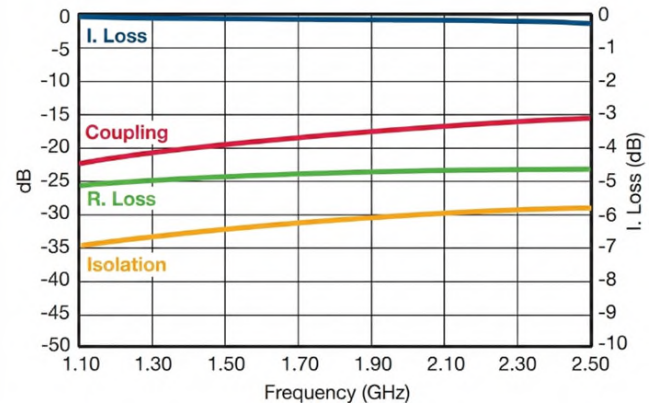
CP0805BxxxxCSTR



Coupler P/N CP0805BxxxxCSTR

P/N Examples*	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	R. Loss max. [dB]
CP0805B0836CSTR	824 - 849	-25±1	-0.25	-21
CP0805B0881CSTR	869 - 894	-24.5±1	-0.25	-21
CP0805B0902CSTR	890 - 915	-24±1	-0.25	-21
CP0805B0947CSTR	935 - 960	-24±1	-0.25	-21
CP0805B0897CSTR	880 - 915	-24.5±1	-0.25	-21
CP0805B0942CSTR	925 - 960	-24±1	-0.25	-21
CP0805B1441CSTR	1429 - 1453	-20±1	-0.25	-21
CP0805B1747CSTR	1710 - 1785	-18.5±1	-0.25	-21
CP0805B1842CSTR	1805 - 1880	-18.5±1	-0.25	-21
CP0805B1880CSTR	1850 - 1910	-18±1	-0.25	-21
CP0805B1960CSTR	1930 - 1990	-17.5±1	-0.25	-21
CP0805B1907CSTR	1895 - 1920	-18±1	-0.25	-21
CP0805B1890CSTR	1880 - 1900	-18±1	-0.25	-21
CP0805B2442CSTR	2400 - 2484	-16±1	-0.4	-21

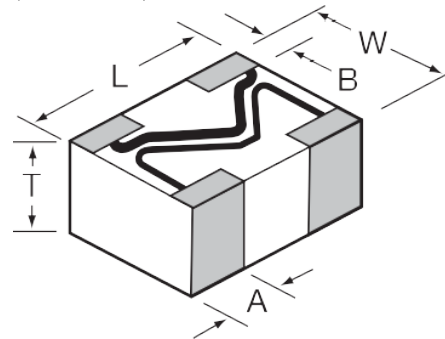
Important: Couplers can be used at any frequency within the indicated range.



TERMINALS (TOP VIEW)

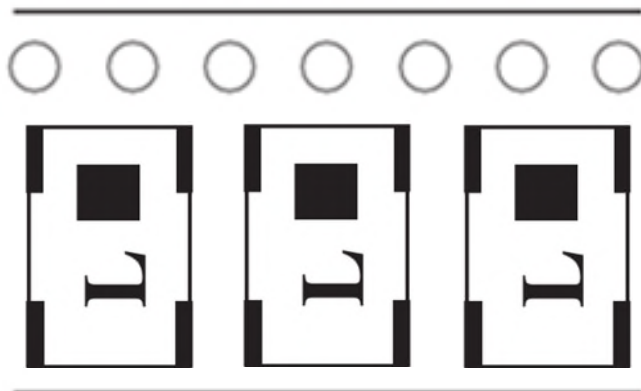


DIMENSIONS: millimeters (inches) (Bottom View)

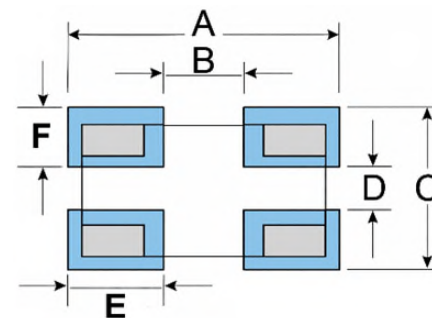


L	2.03±0.1 (0.080±0.004)
W	1.55±0.1 (0.061±0.004)
T	0.98±0.1 (0.039±0.004)
A	0.56±0.25 (0.022±0.020)
B	0.35±0.15 (0.015±0.006)

ORIENTATION IN TAPE



RECOMMENDED PAD LAYOUT DIMENSIONS: millimeters (inches)



A	1.85±0.05 (0.073±0.002)
B	0.45±0.05 (0.018±0.002)
C	1.08±0.05 (0.043±0.002)
D	0.28±0.05 (0.011±0.002)
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F	0.40±0.05 (0.016±0.002)

*The recommended distance to the PCB Ground Plane is 0.254mm (0.010")

Thin-Film RF/Microwave Directional Couplers

CP0805 High Directivity SMD Type

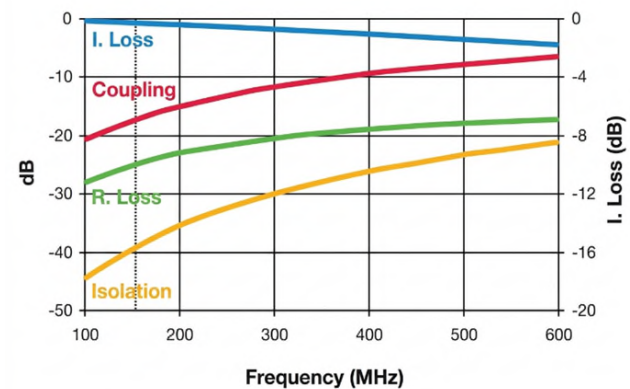
CP0805L0155ASTR



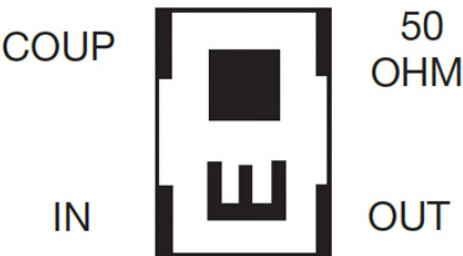
Coupler P/N CP0805L0155ASTR

P/N Examples*	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	R. Loss max. [dB]	Directivity [dB]
CP0805L0155ASTR	155	-17.1±1	-0.35	-24	-22

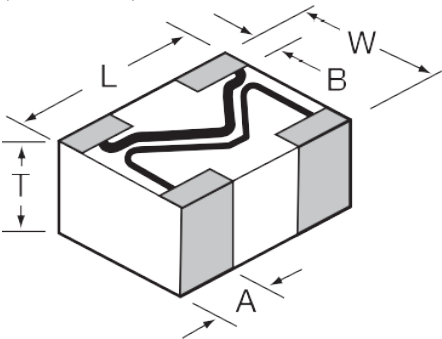
Important: Couplers can be used at any frequency within the indicated range.



TERMINALS (TOP VIEW)

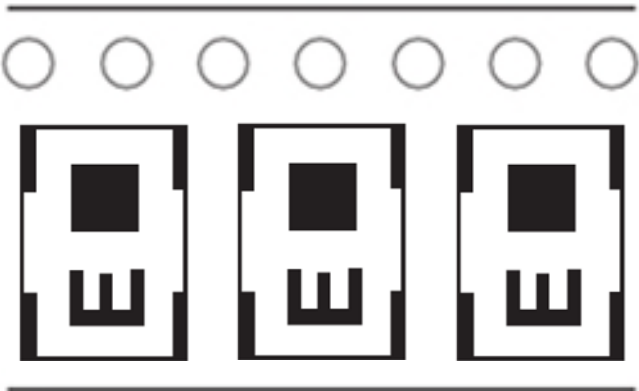


DIMENSIONS: millimeters (inches)
(Bottom View)

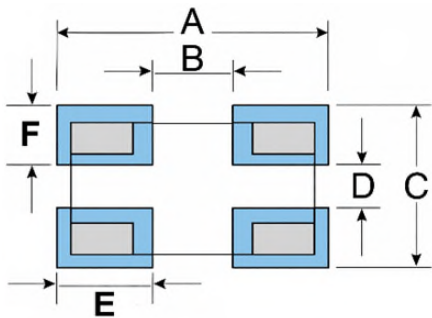


L	2.03±0.1 (0.080±0.004)
W	1.55±0.1 (0.061±0.004)
T	0.98±0.1 (0.039±0.004)
A	0.56±0.25 (0.022±0.020)
B	0.35±0.15 (0.015±0.006)

ORIENTATION IN TAPE



RECOMMENDED PAD LAYOUT DIMENSIONS:
millimeters (inches)



A	1.85±0.05 (0.073±0.002)
B	0.45±0.05 (0.018±0.002)
C	1.08±0.05 (0.043±0.002)
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Thin-Film RF/Microwave Directional Couplers

CP0805 High Directivity SMD Type

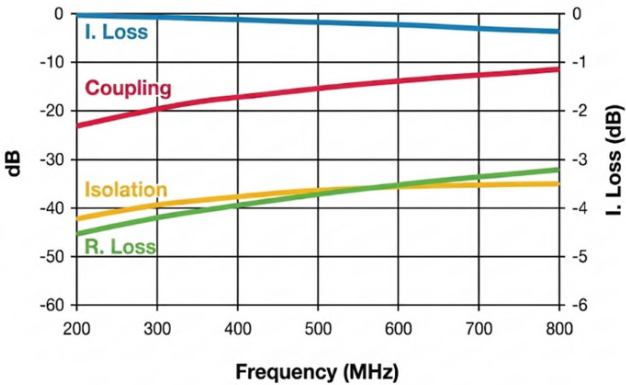
CP0805L0436BSTR



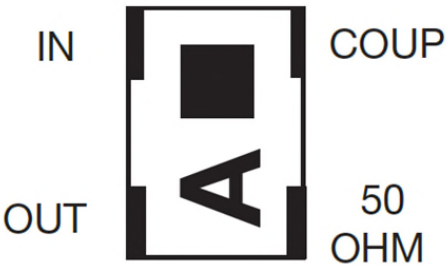
Coupler P/N CP0805L0436BSTR

P/N Examples*	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	R. Loss max. [dB]	Directivity [dB]
CP0805L0436BSTR	403 - 470	-15.85±1	-0.25	-35	-22

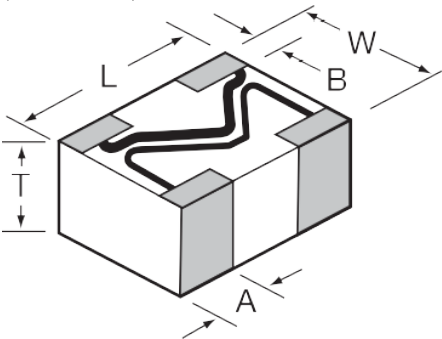
Important: Couplers can be used at any frequency within the indicated range.



TERMINALS (TOP VIEW)

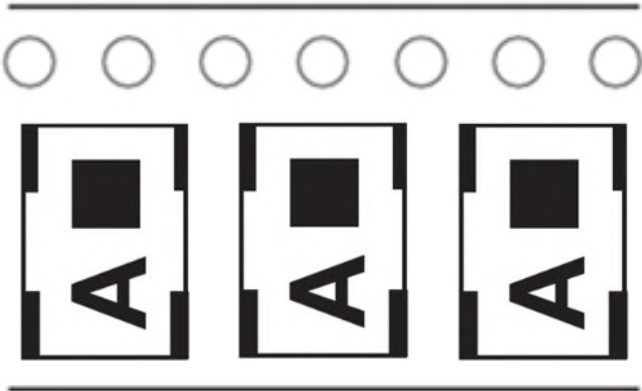


DIMENSIONS: millimeters (inches) (Bottom View)

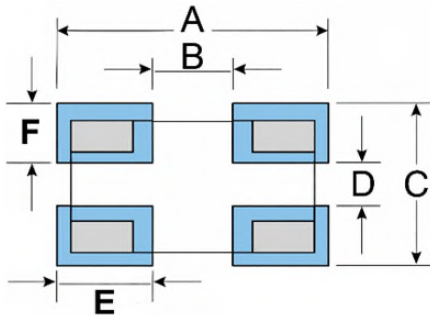


L	2.03±0.1 (0.080±0.004)
W	1.55±0.1 (0.061±0.004)
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A	0.56±0.25 (0.022±0.020)
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