Thin Film Directional Coupler

CP0402P High Directivity, Tight Coupling Tolerance

GENERAL DESCRIPTION

ITF (Integrated Thin-Film) TECHNOLOGY

The CP0402P Series High Directivity, Tight Coupling Tolerance LGA Coupler is based on the proprietary RFAP Thin-Film multilayer technology. The technology provides a miniature part with excellent high frequency performance and ugged 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

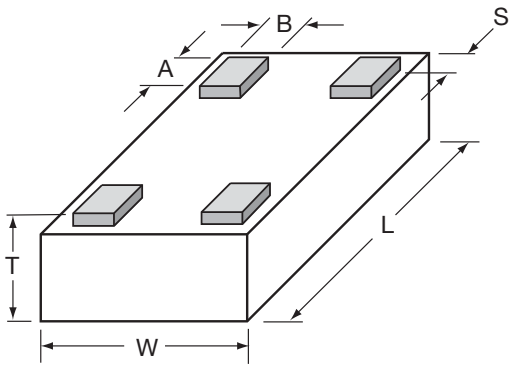
- Wireless communications
- Wireless LAN's
- GPS
- WiMAX

LAND GRID ARRAY ADVANTAGES

- Inherent Low Profile
- Self Alignment during Reflow
- Excellent Solderability
- Low Parasitics
- Better Heat Dissipation
- Power Rating 3W RF Continuous

DIMENSIONS: (Bottom View)

millimeters (inches)



L	1.00±0.05 (0.040±0.002)
W	0.58±0.04 (0.023±0.002)
T	0.35±0.05 (0.014±0.002)

A	0.20±0.05 (0.008±0.002)
B	0.18±0.05 (0.007±0.002)
S	0.05±0.05 (0.002±0.002)

HOW TO ORDER

CP	0402	P	XXXX	X	N	TR
Style	**Size** 0402	**Type** ±0.5dB Tight Tolerance	**Frequency** MHz	**Sub-Type**	**Termination** LGA Lead-Free	**Taped & Reeled**

LEAD-FREE

LEAD-FREE COMPATIBLE COMPONENT

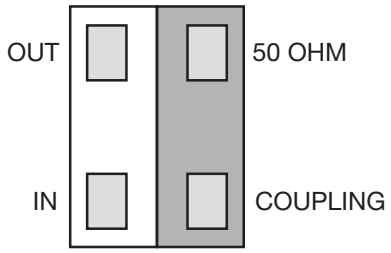
RoHS COMPLIANT

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

TERMINALS (Top View)



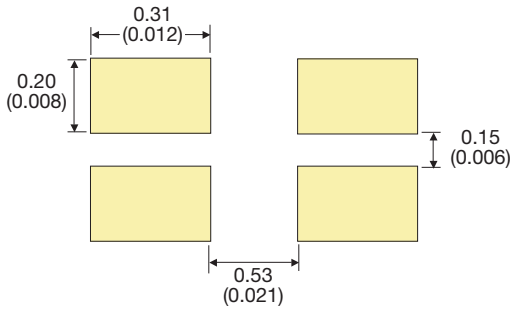
TERMINATION

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

OPERATING TEMPERATURE:

-40°C to +85°C

Recommended Pad Layout Dimensions mm (inches)



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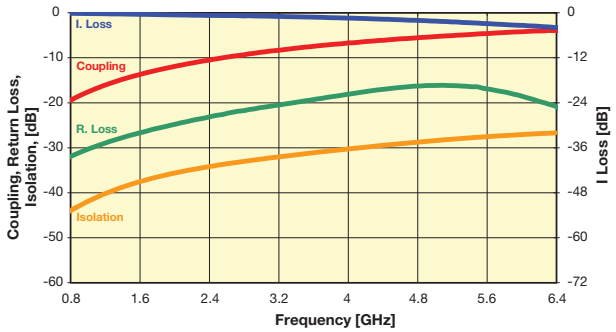
Thin Film Directional Coupler

CP0402P High Directivity, Tight Coupling Tolerance

Coupler P/N CP0402PxxxxAN

Application	P/N Examples*	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0402P0836AN	824 - 849	19.10±0.5	0.25	32	21
	CP0402P0881AN	869 - 894	18.60±0.5	0.25	31	
GSM	CP0402P0902AN	890 - 915	18.50±0.5	0.25	31	
	CP0402P0947AN	935 - 960	18.00±0.5	0.25	31	
E-GSM	CP0402P0897AN	880 - 915	18.50±0.5	0.25	31	
	CP0402P0942AN	925 - 960	18.00±0.5	0.25	31	
PDC	CP0402P1441AN	1429 - 1453	14.50±0.5	0.40	28	
PCN	CP0402P1747AN	1710 - 1785	13.00±0.5	0.50	26	
	CP0402P1842AN	1805 - 1880	12.50±0.5	0.50	26	
PCS	CP0402P1880AN	1850 - 1910	12.30±0.5	0.50	25	
	CP0402P1960AN	1930 - 1990	12.00±0.5	0.50	25	
PHP	CP0402P1907AN	1895 - 1920	12.30±0.5	0.50	25	
DECT	CP0402P1890AN	1880 - 1900	12.30±0.5	0.50	25	
Wireless LAN	CP0402P2442AN	2400 - 2484	10.30±0.5	0.70	23	
WiFi	CP0402P3500AN	3450 - 3550	7.60±0.5	1.30	15	14
	CP0402P5000AN	4950 - 5050	5.00±0.5	1.50	15	13
	CP0402P5500AN	5450 - 5550	4.60±0.5	1.50	14	13
	CP0402P6000AN	5950 - 6050	4.00±0.5	1.50	14	13

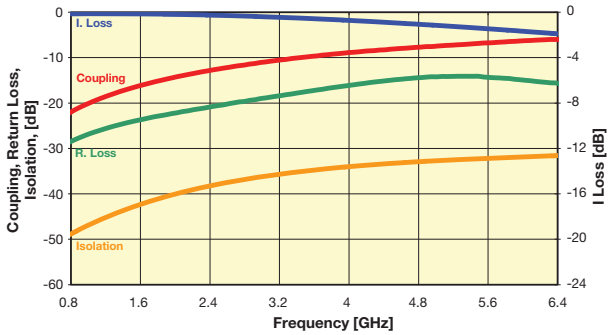
CP0402PxxxxANTR



Coupler P/N CP0402PxxxxBN

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0402P0836BN	824 - 849	22.00±0.5	0.20	28	27
	CP0402P0881BN	869 - 894	21.70±0.5	0.20	28	
GSM	CP0402P0902BN	890 - 915	21.50±0.5	0.20	28	
	CP0402P0947BN	935 - 960	21.00±0.5	0.25	27	
E-GSM	CP0402P0897BN	880 - 915	21.50±0.5	0.20	28	
	CP0402P0942BN	925 - 960	21.00±0.5	0.25	27	
PDC	CP0402P1441BN	1429 - 1453	17.50±0.5	0.25	24	
PCN	CP0402P1747BN	1710 - 1785	16.00±0.5	0.30	23	
	CP0402P1842BN	1805 - 1880	15.50±0.5	0.35	23	
PCS	CP0402P1880BN	1850 - 1910	15.50±0.5	0.35	23	
	CP0402P1960BN	1930 - 1990	15.00±0.5	0.35	22	
PHP	CP0402P1907BN	1895 - 1920	15.50±0.5	0.35	23	
DECT	CP0402P1890BN	1880 - 1900	15.50±0.5	0.35	23	
Wireless LAN	CP0402P2442BN	2400 - 2484	13.30±0.5	0.40	21	
WiFi	CP0402P3500BN	3450 - 3550	9.40±0.5	0.80	18	14
	CP0402P5000BN	4950 - 5050	7.40±0.5	1.20	14	13
	CP0402P5500BN	5450 - 5550	6.70±0.5	1.60	14	13
	CP0402P6000BN	5950 - 6050	6.10±0.5	2.00	14	13

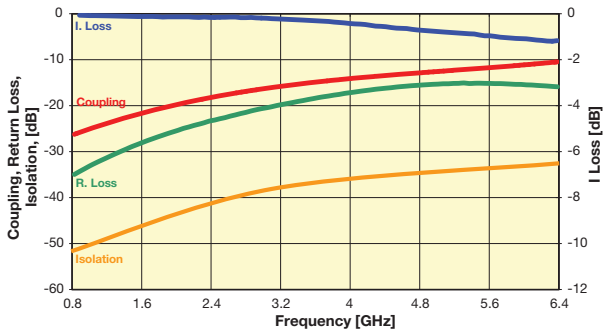
CP0402PxxxxBNTR



Coupler P/N CP0402PxxxxEN

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0402P0836EN	824 - 849	27.20±0.5	0.20	35	25
	CP0402P0881EN	869 - 894	26.80±0.5	0.20	34	
GSM	CP0402P0902EN	890 - 915	26.50±0.5	0.20	34	
	CP0402P0947EN	935 - 960	26.00±0.5	0.20	34	
E-GSM	CP0402P0897EN	880 - 915	26.50±0.5	0.20	34	
	CP0402P0942EN	925 - 960	26.00±0.5	0.20	34	
PDC	CP0402P1441EN	1429 - 1453	22.30±0.5	0.25	29	
PCN	CP0402P1747EN	1710 - 1785	20.50±0.5	0.25	27	23
	CP0402P1842EN	1805 - 1880	20.30±0.5	0.25	26	
PCS	CP0402P1880EN	1850 - 1910	20.00±0.5	0.25	26	
	CP0402P1960EN	1930 - 1990	20.00±0.5	0.25	26	
PHP	CP0402P1907EN	1895 - 1920	20.00±0.5	0.25	26	
DECT	CP0402P1890EN	1880 - 1900	20.00±0.5	0.25	26	
Wireless LAN	CP0402P2442EN	2400 - 2484	18.00±0.5	0.35	23	
WiFi	CP0402P3500EN	3450 - 3550	15.00±0.5	0.37	20	16
	CP0402P5000EN	4950 - 5050	12.50±0.5	0.50	18	13
	CP0402P5500EN	5450 - 5550	11.50±0.5	0.65	16	13
	CP0402P6000EN	5950 - 6050	11.10±0.5	0.70	15	13

CP0402PxxxxENTR



Mouser Electronics

Authorized Distributor

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AVX:

CP0402P2442BNTR CP0402P2442ENTR CP0402P1907BNTR CP0402P1960BNTR CP0402P1960ANTR CP0402P1950ENTR CP0402P1950BNTR CP0402P1950ANTR CP0402P1907ENTR CP0402P2442ANTR CP0402P0897ENTR CP0402P3500ANTR CP0402P0836ANTR CP0402P0836ENTR CP0402P0881ANTR CP0402P2140ENTR CP0402P1842ANTR CP0402P1890ENTR CP0402P1890BNTR CP0402P1890ANTR CP0402P1880ENTR CP0402P1880BNTR CP0402P1880ANTR CP0402P3500ENTR CP0402P1842BNTR CP0402P1960ENTR CP0402P1747ENTR CP0402P1842ENTR CP0402P2140ANTR CP0402P0836BNTR CP0402P3500BNTR CP0402P0881BNTR CP0402P1907ANTR CP0402P0947ANTR CP0402P2140BNTR CP0402P0897ANTR CP0402P0942ANTR CP0402P1441ENTR CP0402P1441BNTR CP0402P1441ANTR CP0402P0881ENTR CP0402P0947BNTR CP0402P0942ENTR CP0402P0942BNTR CP0402P1747ANTR CP0402P0902ENTR CP0402P0902BNTR CP0402P0902ANTR CP0402P1747BNTR CP0402P0897BNTR CP0402P0947ENTR CP0402P1880FNTR CP0402P1900JNTR CP0402P1088ENTR CP0402P5000HNTR CP0402P1640BNTR CP0402P5000ANTR CP0402P3000ANTR CP0402P1643ENTR CP0402P1880HNTR CP0402P5500BNTR