Thin-Film Directional Couplers

CP0603 High Directivity LGA Termination

GENERAL DESCRIPTION
ITF (Integrated Thin-Film) TECHNOLOGY

The ITF LGA 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

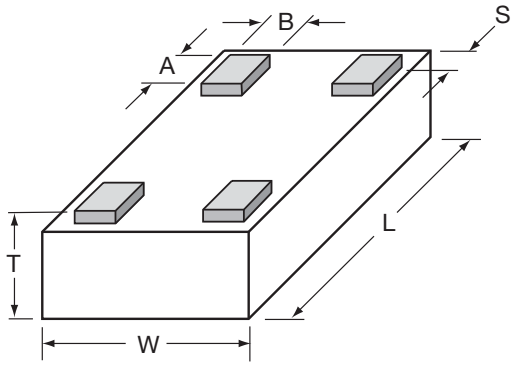
- Mobile Communications
- Satellite TV Receivers
- GPS
- Vehicle Location Systems
- Wireless LAN's

FEATURES

- Inherent Low Profile
- Self Alignment during Reflow
- Excellent Solderability
- Low Parasitics
- Better Heat Dissipation
- Operating/Storage Temp -40°C to +85°C
- Power Rating 3W RF Cont

DIMENSIONS: (Bottom View)

millimeters (inches)



L	1.60±0.10 (0.063±0.004)
W	0.84±0.10 (0.033±0.004)
T	0.60±0.10 (0.024±0.004)

A	0.25±0.05 (0.010±0.002)
B	0.20±0.05 (0.008±0.002)
S	0.05±0.05 (0.002±0.002)

HOW TO ORDER

CP	0603	X	****	X	N	TR
Style Directional Coupler	**Size** 0603	**Type**	**Frequency** (MHz)	**Sub Type**	**Termination Code** L = LGA Sn90, Pb10 **N = LGA Sn100	**Packaging Code** TR = Tape and Reel

**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:

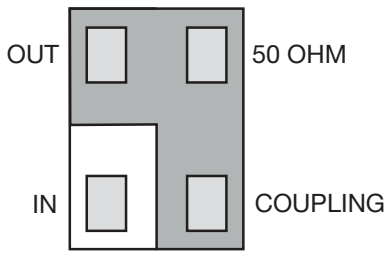
- Static Humidity: 85°C, 85% RH, 160 hours
- Endurance: 125°C, I_R, 4 hours

TERMINATION

Sn90Pb10 or Lead-Free Sn100 Nickel/Solder coating compatible with automatic soldering technologies: reflow, wave soldering, vapor phase and manual.

TERMINALS (Top View)

Not RoHS Compliant

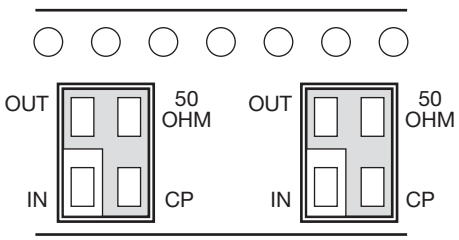


LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

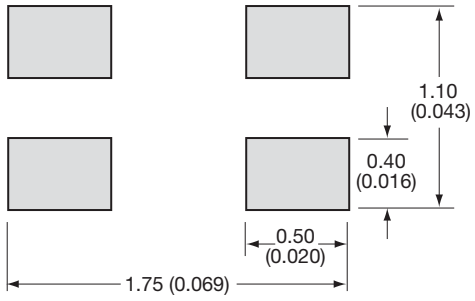
For RoHS compliant products, please select correct termination style.

ORIENTATION IN TAPE



Recommended Pad Layout Dimensions

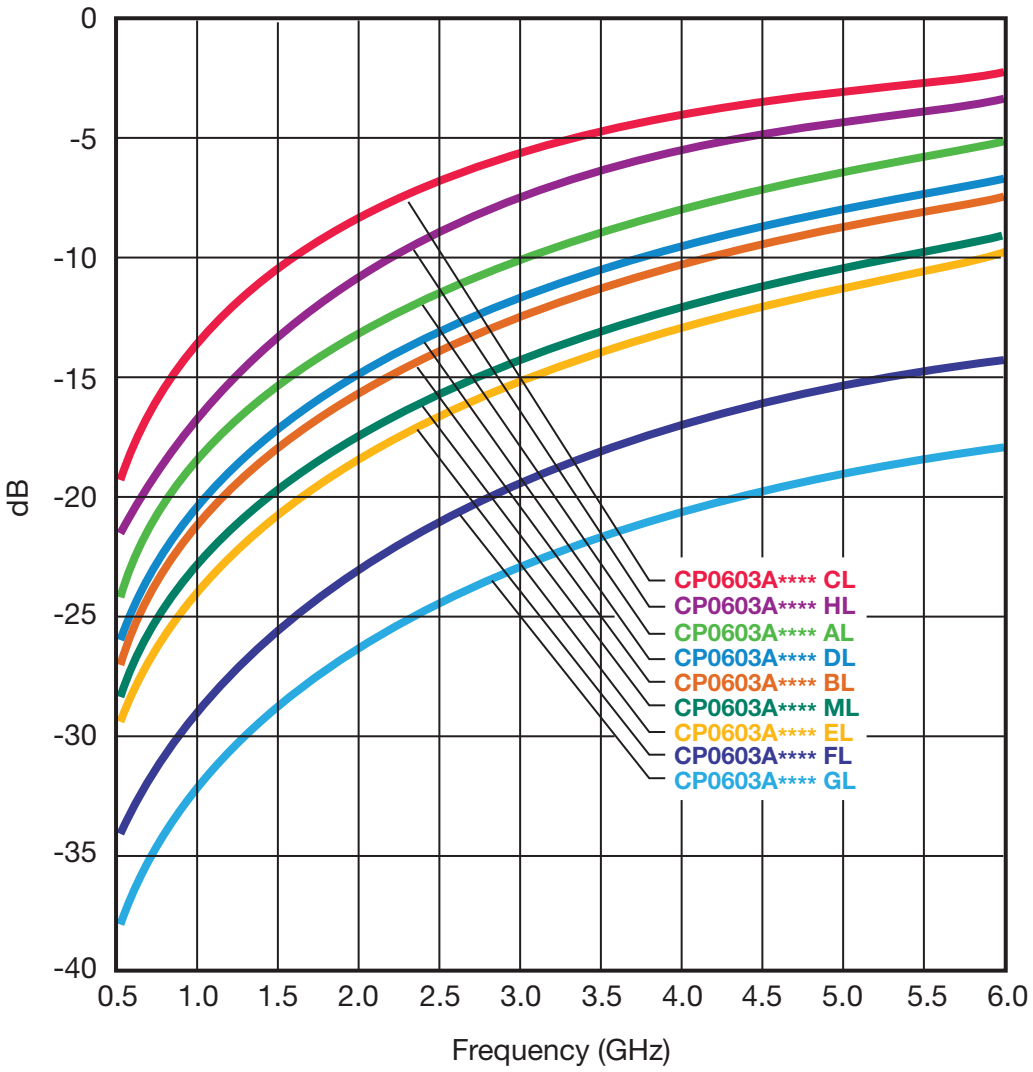
mm (inches)



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

COUPLER TYPE SELECTION GRAPH

Coupling vs. Frequency



Intermediate coupling factors are readily available.
Please contact factory.

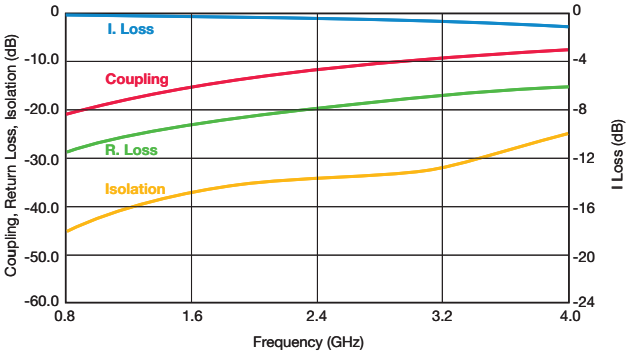
Thin-Film Directional Couplers

CP0603 High Directivity LGA Type

Coupler P/N CP0603AxxxxAL

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603A0836AL	824 - 849	20.0	0.25	28	22
	CP0603A0881AL	869 - 894	19.7			
GSM	CP0603A0902AL	890 - 915	19.4		27	
	CP0603A0947AL	935 - 960	19.0			
E-GSM	CP0603A0897AL	880 - 915	19.4		28	
	CP0603A0942AL	925 - 960	19.0		27	
PDC	CP0603A1441AL	1429 - 1453	15.5	0.40	24	
PCN	CP0603A1747AL	1710 - 1785	14.0	0.50	22	
	CP0603A1842AL	1805 - 1880	13.5			
PCS	CP0603A1880AL	1850 - 1910	13.2			
	CP0603A1960AL	1930 - 1990	13.0	0.55	21	
PHP	CP0603A1907AL	1895 - 1920	13.2	0.50	22	
DECT	CP0603A1890AL	1880 - 1900				
Wireless LAN	CP0603A2442AL	2400 - 2484	11.5	0.75	20	

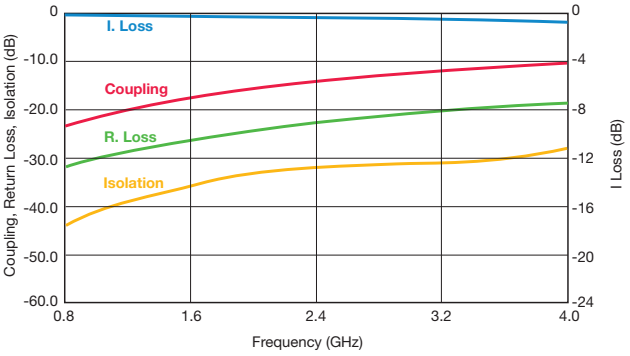
CP0603AxxxxALTR



Coupler P/N CP0603AxxxxBL

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603A0836BL	824 - 849	23.0	0.20	31	20
	CP0603A0881BL	869 - 894	22.7			
GSM	CP0603A0902BL	890 - 915	22.5			
	CP0603A0947BL	935 - 960	22.0		30	
E-GSM	CP0603A0897BL	880 - 915	22.5		31	
	CP0603A0942BL	925 - 960	22.0		30	
PDC	CP0603A1441BL	1429 - 1453	18.5	0.25	27	
PCN	CP0603A1747BL	1710 - 1785	17.0		25	
	CP0603A1842BL	1805 - 1880	16.4			
PCS	CP0603A1880BL	1850 - 1910	16.2			
	CP0603A1960BL	1930 - 1990	16.0		24	
PHP	CP0603A1907BL	1895 - 1920	16.1		25	
DECT	CP0603A1890BL	1880 - 1900	16.2			
Wireless LAN	CP0603A2442BL	2400 - 2484	14.2	0.35	23	

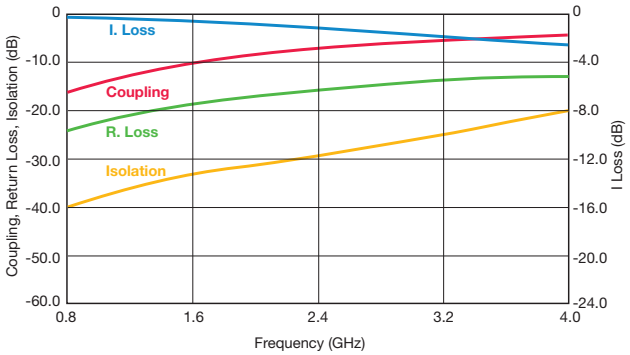
CP0603AxxxxBLTR



Coupler P/N CP0603AxxxxCL

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603A0836CL	824 - 849	15.2	0.35	23	23
	CP0603A0881CL	869 - 894	15.0			
GSM	CP0603A0902CL	890 - 915	14.7			
	CP0603A0947CL	935 - 960	14.3	0.40	22	
E-GSM	CP0603A0897CL	880 - 915	14.7	0.35	23	
	CP0603A0942CL	925 - 960	14.3	0.40	22	
PDC	CP0603A1441CL	1429 - 1453	11.0	0.70	19	
PCN	CP0603A1747CL	1710 - 1785	9.5	0.80	18	21
	CP0603A1842CL	1805 - 1880	9.0	0.90	17	
PCS	CP0603A1880CL	1850 - 1910	8.8			
	CP0603A1960CL	1930 - 1990	8.5	1.00		
PHP	CP0603A1907CL	1895 - 1920	8.8	0.90		
DECT	CP0603A1890CL	1880 - 1900				
Wireless LAN	CP0603A2442CL	2400 - 2484	7.0	1.40	15	

CP0603AxxxxCLTR



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

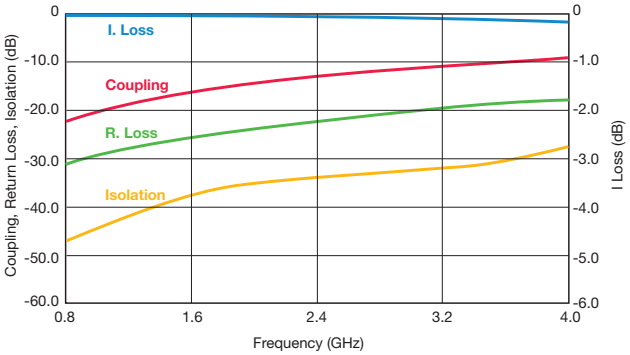
Thin-Film Directional Couplers

CP0603 High Directivity LGA Type

Coupler P/N CP0603AxxxxDL

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603A0836DL	824 - 849	22.0	0.25	31	22
	CP0603A0881DL	869 - 894	21.8		30	
GSM	CP0603A0902DL	890 - 915	21.3			
	CP0603A0947DL	935 - 960	21.0	0.30		
E-GSM	CP0603A0897DL	880 - 915	21.3	0.25		
	CP0603A0942DL	925 - 960	21.0	0.30		
PDC	CP0603A1441DL	1429 - 1453	17.7	0.40	27	21
PCN	CP0603A1747DL	1710 - 1785	16.0		25	
	CP0603A1842DL	1805 - 1880	15.4			
PCS	CP0603A1880DL	1850 - 1910	15.2		24	
	CP0603A1960DL	1930 - 1990	15.0			
PHP	CP0603A1907DL	1895 - 1920	15.2			
DECT	CP0603A1890DL	1880 - 1900				
Wireless LAN	CP0603A2442DL	2400 - 2484	13.3	0.55	22	

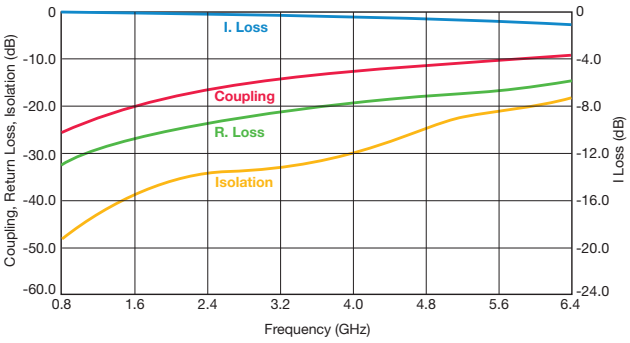
CP0603AxxxxDLTR



Coupler P/N CP0603AxxxxEL

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603A0836EL	824 - 849	25.8	0.20	32	21
	CP0603A0881EL	869 - 894	25.3			
GSM	CP0603A0902EL	890 - 915	25.0			
	CP0603A0947EL	935 - 960	24.7		31	
E-GSM	CP0603A0897EL	880 - 915	25.0		32	
	CP0603A0942EL	925 - 960	24.7		31	
PDC	CP0603A1441EL	1429 - 1453	21.0	0.25	28	
PCN	CP0603A1747EL	1710 - 1785	19.5	0.30	26	
	CP0603A1842EL	1805 - 1880	19.0			
PCS	CP0603A1880EL	1850 - 1910	18.8			
	CP0603A1960EL	1930 - 1990	18.5			
PHP	CP0603A1907EL	1895 - 1920	18.7			
DECT	CP0603A1890EL	1880 - 1900	18.8			
Wireless LAN	CP0603A2442EL	2400 - 2484	17.0	0.40	24	

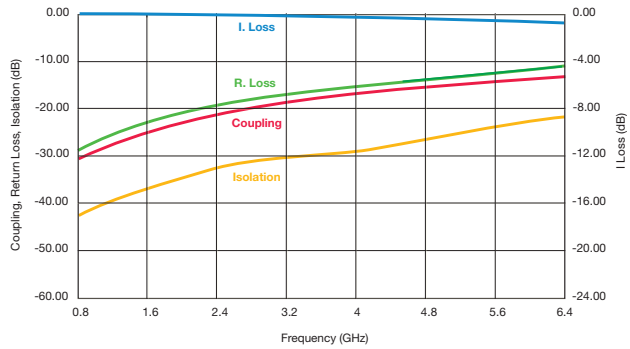
CP0603AxxxxELTR



Coupler P/N CP0603AxxxxFL

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603A0836FL	824 - 849	31.2	0.20	28	12
	CP0603A0881FL	869 - 894	30.8			
GSM	CP0603A0902FL	890 - 915	30.5		27	
	CP0603A0947FL	935 - 960	30.2			
E-GSM	CP0603A0897FL	880 - 915	30.5			
	CP0603A0942FL	925 - 960	30.2			
PDC	CP0603A1441FL	1429 - 1453	27.0	0.25	23	
PCN	CP0603A1747FL	1710 - 1785	25.0		21	
	CP0603A1842FL	1805 - 1880	24.5			
PCS	CP0603A1880FL	1850 - 1910	24.3			
	CP0603A1960FL	1930 - 1990	24.0		20	
PHP	CP0603A1907FL	1895 - 1920	24.2		21	
DECT	CP0603A1890FL	1880 - 1900				
Wireless LAN	CP0603A2442FL	2400 - 2484	21.5		20	

CP0603AxxxxFLTR



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

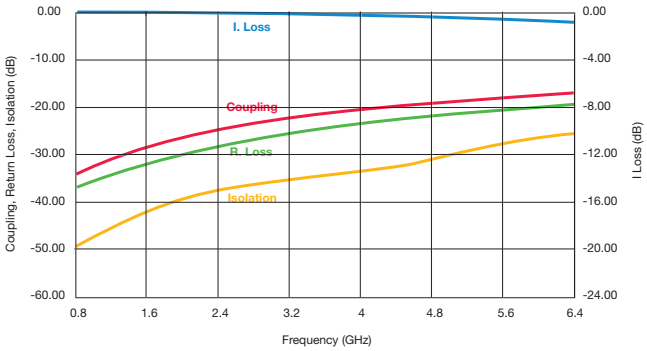
Thin-Film Directional Couplers

CP0603 High Directivity LGA Type

Coupler P/N CP0603AxxxxGL

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603A0836GL	824 - 849	34.2	0.20	39	13
	CP0603A0881GL	869 - 894	33.8			
GSM	CP0603A0902GL	890 - 915	33.6			
	CP0603A0947GL	935 - 960	33.2		38	
E-GSM	CP0603A0897GL	880 - 915	33.6		39	
	CP0603A0942GL	925 - 960	33.2		38	
PDC	CP0603A1441GL	1429 - 1453	30.0	0.25	34	
PCN	CP0603A1747GL	1710 - 1785	28.5		32	
	CP0603A1842GL	1805 - 1880	28.0			
PCS	CP0603A1880GL	1850 - 1910	27.7			
	CP0603A1960GL	1930 - 1990	27.5		31	
PHP	CP0603A1907GL	1895 - 1920	27.6		32	
DECT	CP0603A1890GL	1880 - 1900	27.7			
Wireless LAN	CP0603A2442GL	2400 - 2484	25.5		31	

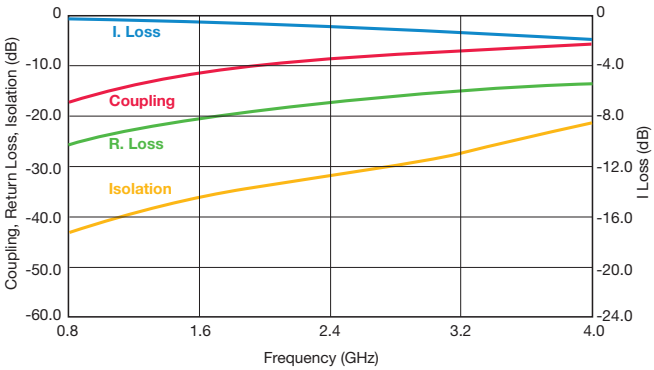
CP0603AxxxxGLTR



Coupler P/N CP0603AxxxxHL

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603A0836HL	824 - 849	17.3	0.30	26	26
	CP0603A0881HL	869 - 894	17.0		25	
GSM	CP0603A0902HL	890 - 915	16.7			
	CP0603A0947HL	935 - 960	16.3	0.35		
E-GSM	CP0603A0897HL	880 - 915	17.0			
	CP0603A0942HL	925 - 960	16.3			
PDC	CP0603A1441HL	1429 - 1453	13.0	0.55	22	
PCN	CP0603A1747HL	1710 - 1785	11.4	0.75	20	24
	CP0603A1842HL	1805 - 1880	11.0		19	
PCS	CP0603A1880HL	1850 - 1910	10.8			
	CP0603A1960HL	1930 - 1990	10.5			
PHP	CP0603A1907HL	1895 - 1920	10.7			
DECT	CP0603A1890HL	1880 - 1900	10.8			
Wireless LAN	CP0603A2442HL	2400 - 2484	8.8	1.00	17	

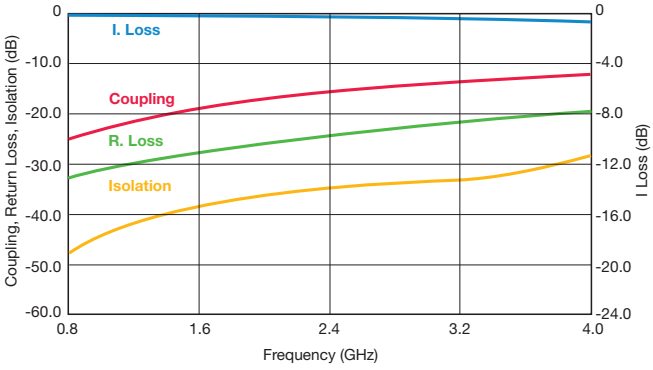
CP0603AxxxxHLTR



Coupler P/N CP0603AxxxxML

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603A0836ML	824 - 849	24.2	0.20	33	23
	CP0603A0881ML	869 - 894	23.8		32	
GSM	CP0603A0902ML	890 - 915	23.4			
	CP0603A0947ML	935 - 960	23.2			
E-GSM	CP0603A0897ML	880 - 915	23.4			
	CP0603A0942ML	925 - 960	23.2			
PDC	CP0603A1441ML	1429 - 1453	20.0	0.25	28	20
PCN	CP0603A1747ML	1710 - 1785	18.4		27	
	CP0603A1842ML	1805 - 1880	18.0		26	
PCS	CP0603A1880ML	1850 - 1910	17.8			
	CP0603A1960ML	1930 - 1990	17.5			
PHP	CP0603A1907ML	1895 - 1920	17.7			
DECT	CP0603A1890ML	1880 - 1900	17.8			
Wireless LAN	CP0603A2442ML	2400 - 2484	15.6	0.35	24	

CP0603AxxxxMLTR



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

OCEAN CHIPS
Океан Электроники
Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».

AVIC JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

FORSTAR®

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