Thin-Film Directional Couplers

CP0603 SMD Type

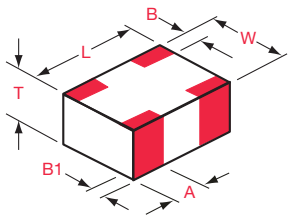
GENERAL DESCRIPTION
ITF (Integrated Thin-Film) TECHNOLOGY

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.

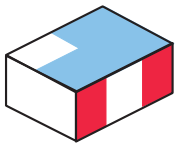
The ITF Coupler is offered in a variety of frequency bands compatible with various types of high frequency wireless systems.

DIMENSIONS:

millimeters (inches)



Bottom View



Top View

	0603
L	1.6±0.1 (0.063±0.004)
W	0.84±0.1 (0.033±0.004)
T	0.60±0.1 (0.028±0.004)
A	0.35±0.15 (0.014±0.006)
B	0.175±0.1 (0.007±0.004)
B1	0.00+0.1/0-0.0 (0.00+0.004/-0.0)

APPLICATIONS

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

FEATURES

- Miniature Size: 0603
- Frequency Range: 800MHz - 3GHz
- Characteristic Impedance: 50Ω
- Operating / Storage Temp.: -40ºC to +85ºC
- Power Rating: 3W Continuous
- Low Profile
- Rugged Construction
- Taped and Reeled

3

HOW TO ORDER

CP	0603	X	****	X	S	TR
Style Directional Coupler	**Size** 0603	**Type**	**Frequency** MHz	**Sub Type**	**Termination Code** W = Sn90, Pb10 **S = 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:

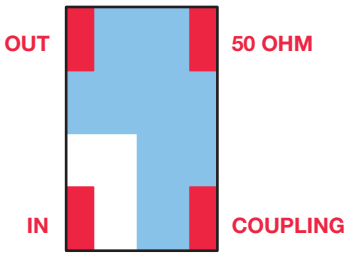
- Static Humidity: 85°C, 85% RH, 160 hours
- Endurance: 125°C, I_R, 4 hours

TERMINATION

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

TERMINALS (Top View)

Not RoHS Compliant



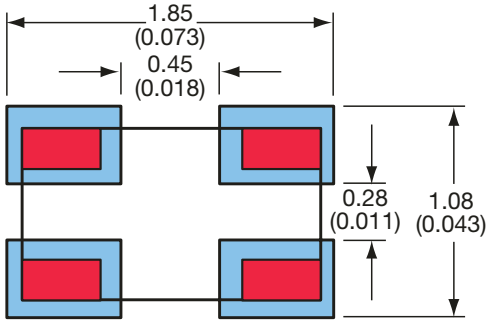
LEAD-FREE

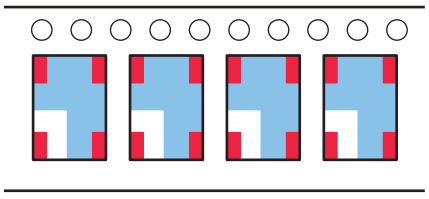
LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

For RoHS compliant products, please select correct termination style.

Recommended Pad Layout Dimensions mm (inches)





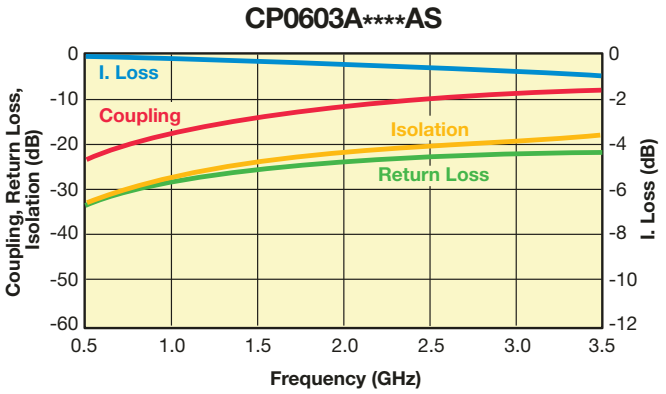
Orientation in tape

Thin-Film Directional Couplers

CP0603 SMD Type

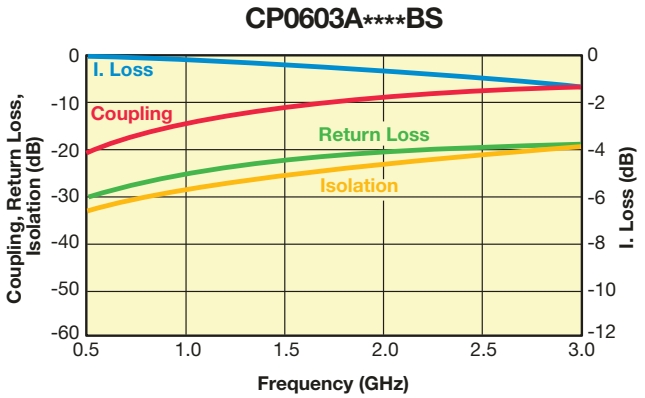
Coupler P/N CP0603A****AS

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max	VSWR max
AMPS	CP0603A0836AS	824 - 849	18.5±1	0.25	1.2
	CP0603A0881AS	869 - 894	18.5±1		
GSM	CP0603A0902AS	890 - 915	18±1		
	CP0603A0947AS	935 - 960	17.5±1		
E-GSM	CP0603A0897AS	880 - 915	18±1		
	CP0603A0942AS	925 - 960	17.5±1		
PDC	CP0603A1441AS	1429 - 1453	14±1	0.4	
PCN	CP0603A1747AS	1710 - 1785	12.5±1	0.6	
	CP0603A1842AS	1805 - 1880	12±1		
PCS	CP0603A1880AS	1850 - 1910	12±1		
	CP0603A1960AS	1930 - 1990	11.5±1	0.65	
PHP	CP0603A1907AS	1895 - 1920	12±1	0.6	
DECT	CP0603A1890AS	1880 - 1900	12±1		
Wireless LAN	CP0603A2442AS	2400 - 2484	10±1	0.85	



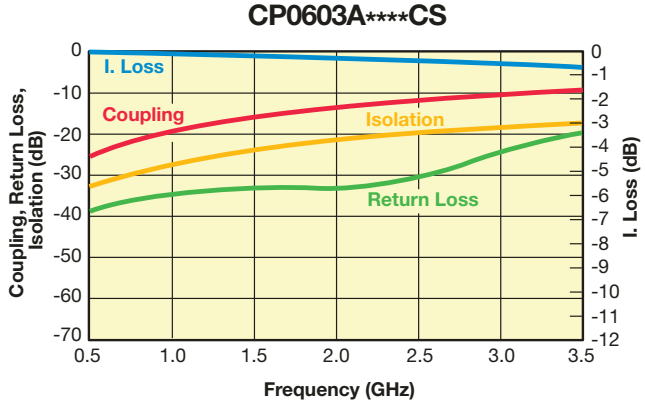
Coupler P/N CP0603A****BS

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max	VSWR max
AMPS	CP0603A0836BS	824 - 849	16±1	0.25	1.2
	CP0603A0881BS	869 - 894	15.5±1		
GSM	CP0603A0902BS	890 - 915	15.5±1		
	CP0603A0947BS	935 - 960	15±1		
E-GSM	CP0603A0897BS	880 - 915	15.5±1		
	CP0603A0942BS	925 - 960	15±1		
PDC	CP0603A1441BS	1429 - 1453	11.5±1	0.55	
PCN	CP0603A1747BS	1710 - 1785	10±1	0.8	1.3
	CP0603A1842BS	1805 - 1880	9.5±1		
PCS	CP0603A1880BS	1850 - 1910	9±1		1.4
	CP0603A1960BS	1930 - 1990	9±1		
PHP	CP0603A1907BS	1895 - 1920	9±1		
DECT	CP0603A1890BS	1880 - 1900	9±1		
Wireless LAN	CP0603A2442BS	2400 - 2484	7.5±1	1.1	



Coupler P/N CP0603A****CS

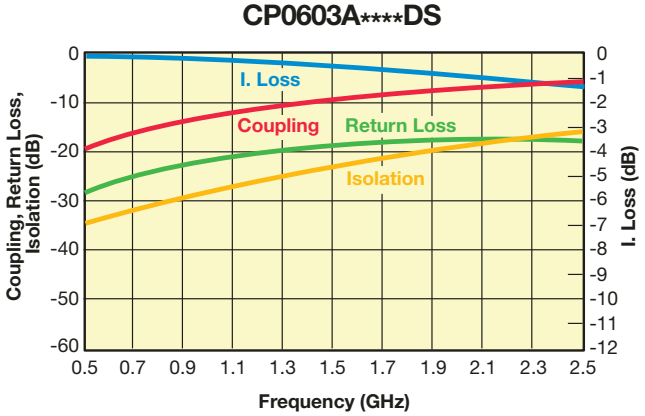
Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max	VSWR max
AMPS	CP0603A0836CS	824 - 849	21±1	0.25	1.2
	CP0603A0881CS	869 - 894	20.5±1		
GSM	CP0603A0902CS	890 - 915	20.5±1		
	CP0603A0947CS	935 - 960	20±1		
E-GSM	CP0603A0897CS	880 - 915	20.5±1		
	CP0603A0942CS	925 - 960	20±1		
PDC	CP0603A1441CS	1429 - 1453	16.5±1	0.40	
PCN	CP0603A1747CS	1710 - 1785	15±1	0.5	
	CP0603A1842CS	1805 - 1880	14.5±1		
PCS	CP0603A1880CS	1850 - 1910	14.5±1		
	CP0603A1960CS	1930 - 1990	14±1		
PHP	CP0603A1907CS	1895 - 1920	14.5±1		
DECT	CP0603A1890CS	1880 - 1900	14.5±1		
Wireless LAN	CP0603A2442CS	2400 - 2484	12.5±1	0.65	



Coupler P/N CP0603A****DS

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max	VSWR max
AMPS	CP0603A0836DS	824 - 849	15.0±1	0.40	1.2
	CP0603A0881DS	869 - 894	14.5±1		
GSM	CP0603A0902DS	890 - 915	14.5±1		
	CP0603A0947DS	935 - 960	14±1		
E-GSM	CP0603A0897DS	880 - 915	14.5±1		
	CP0603A0942DS	925 - 960	14±1		
PDC	CP0603A1441DS	1429 - 1453	10.5±1	0.7	1.3
PCN	CP0603A1747DS	1710 - 1785	9±1	0.9	1.5
	CP0603A1842DS	1805 - 1880	8.5±1		
PCS	CP0603A1880DS	1850 - 1910	8.5±1	1.0	
	CP0603A1960DS	1930 - 1990	8±1		
PHP	CP0603A1907DS	1895 - 1920	8.5±1		
DECT	CP0603A1890DS	1880 - 1900	8.5±1		
Wireless LAN	CP0603A2442DS	2400 - 2484	6.5±1	1.5	

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

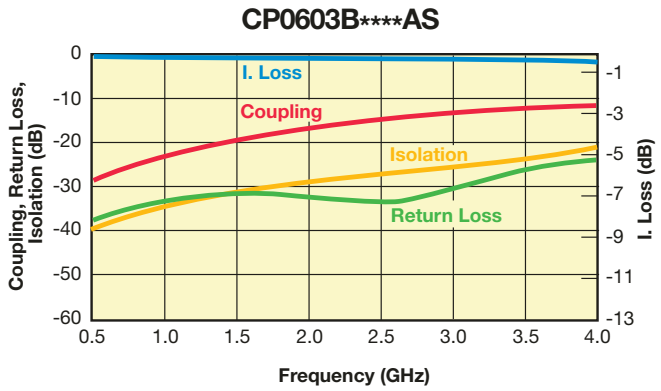


Thin-Film Directional Couplers

CP0603 SMD Type

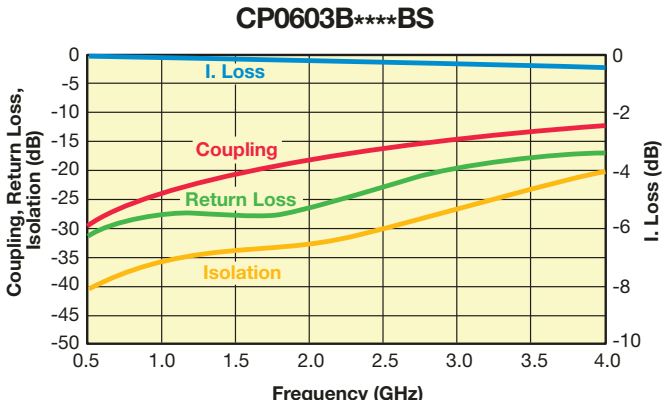
Coupler P/N CP0603B****AS

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max	VSWR max
AMPS	CP0603B0836AS	824 - 849	24.5±1	0.2	1.2
	CP0603B0881AS	869 - 894	24±1		
GSM	CP0603B0902AS	890 - 915	24±1		
	CP0603B0947AS	935 - 960	23.5±1		
E-GSM	CP0603B0897AS	880 - 915	24±1		
	CP0603B0942AS	925 - 960	23.5±1		
PDC	CP0603B1441AS	1429 - 1453	20±1	0.25	
PCN	CP0603B1747AS	1710 - 1785	18±1		
	CP0603B1842AS	1805 - 1880	17.5±1	0.3	
PCS	CP0603B1880AS	1850 - 1910	17.5±1		
	CP0603B1960AS	1930 - 1990	17.5±1		
PHP	CP0603B1907AS	1895 - 1920	17.5±1		
DECT	CP0603B1890AS	1880 - 1900	17.5±1		
Wireless LAN	CP0603B2442AS	2400 - 2484	15.5±1	0.45	



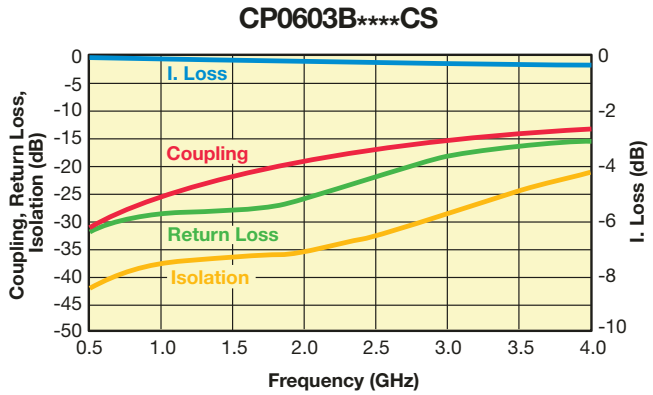
Coupler P/N CP0603B****BS

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max	VSWR max
AMPS	CP0603B0836BS	824 - 849	25.5±1	0.2	1.2
	CP0603B0881BS	869 - 894	25±1		
GSM	CP0603B0902BS	890 - 915	25±1		
	CP0603B0947BS	935 - 960	24.5±1		
E-GSM	CP0603B0897BS	880 - 915	25±1		
	CP0603B0942BS	925 - 960	24.5±1		
PDC	CP0603B1441BS	1429 - 1453	21±1		
PCN	CP0603B1747BS	1710 - 1785	19±1	0.25	
	CP0603B1842BS	1805 - 1880	19±1		
PCS	CP0603B1880BS	1850 - 1910	18.5±1		
	CP0603B1960BS	1930 - 1990	18.5±1		
PHP	CP0603B1907BS	1895 - 1920	18.5±1		
DECT	CP0603B1890BS	1880 - 1900	18.5±1		
Wireless LAN	CP0603B2442BS	2400 - 2484	16.5±1	0.35	



Coupler P/N CP0603B****CS

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max	VSWR max
AMPS	CP0603B0836CS	824 - 849	26.5±1	0.2	1.2
	CP0603B0881CS	869 - 894	26±1		
GSM	CP0603B0902CS	890 - 915	26±1		
	CP0603B0947CS	935 - 960	25.5±1		
E-GSM	CP0603B0897CS	880 - 915	26±1		
	CP0603B0942CS	925 - 960	25.5±1		
PDC	CP0603B1441CS	1429 - 1453	22±1		
PCN	CP0603B1747CS	1710 - 1785	20.5±1	0.25	
	CP0603B1842CS	1805 - 1880	20±1		
PCS	CP0603B1880CS	1850 - 1910	20±1		
	CP0603B1960CS	1930 - 1990	19.5±1		
PHP	CP0603B1907CS	1895 - 1920	20±1		
DECT	CP0603B1890CS	1880 - 1900	20±1		
Wireless LAN	CP0603B2442CS	2400 - 2484	18±1	0.35	1.3



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

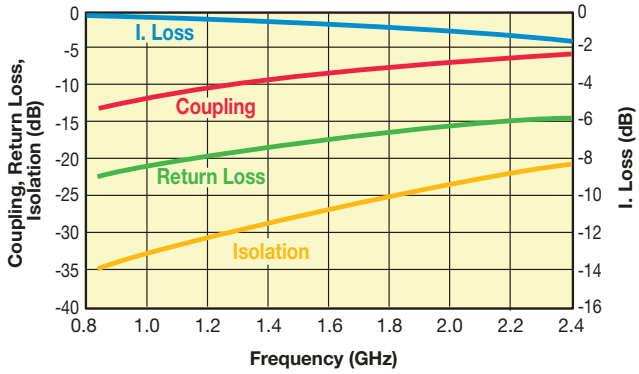
Thin-Film Directional Couplers

CP0603 SMD Type – High Directivity

Coupler P/N CP0603D****AS

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603D0836AS	824 - 849	13.50	0.50	23	21
	CP0603D0881AS	869 - 894	13.00		22	
GSM	CP0603D0902AS	890 - 915				
	CP0603D0947AS	935 - 960	12.50			
E-GSM	CP0603D0897AS	880 - 915	13.00			
	CP0603D0942AS	925 - 960	12.50			
PDC	CP0603D1441AS	1429 - 1453	9.00	1.00	18	19
PCN	CP0603D1747AS	1710 - 1785	8.00	1.40	17	18
	CP0603D1842AS	1805 - 1880	7.50			17
PCS	CP0603D1880AS	1850 - 1910				
	CP0603D1960AS	1930 - 1990			16	
PHP	CP0603D1907AS	1895 - 1920	7.00			
DECT	CP0603D1890AS	1880 - 1900				
Wireless LAN	CP0603D2442AS	2400 - 2484	5.50	2.00	15	15

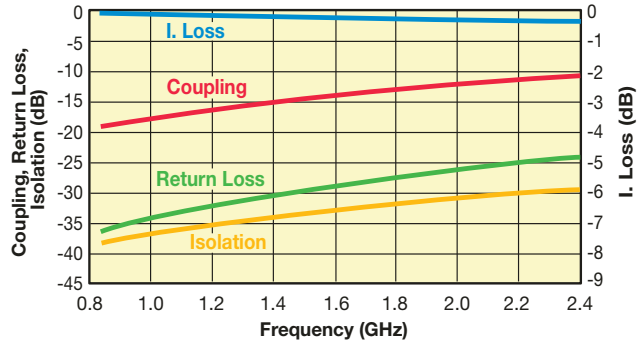
CP0603D****AS



Coupler P/N CP0603D****BW

Application	P/N Examples	Frequency Band [MHz]	Coupling [dB]	I. Loss max. [dB]	Return Loss [dB]	Directivity [dB]
AMPS	CP0603D0836BS	824 - 849	20.00	0.25	36	19
	CP0603D0881BS	869 - 894	19.50			
GSM	CP0603D0902BS	890 - 915			35	
	CP0603D0947BS	935 - 960	19.00			
E-GSM	CP0603D0897BS	880 - 915	19.50		36	
	CP0603D0942BS	925 - 960	19.00		35	
PDC	CP0603D1441BS	1429 - 1453	15.50	0.40	30	
PCN	CP0603D1747BS	1710 - 1785	14.00	0.50	28	
	CP0603D1842BS	1805 - 1880	13.50	0.55	27	
PCS	CP0603D1880BS	1850 - 1910				
	CP0603D1960BS	1930 - 1990				
PHP	CP0603D1907BS	1895 - 1920	13.00			
DECT	CP0603D1890BS	1880 - 1900				
Wireless LAN	CP0603D2442BS	2400 - 2484	11.00	0.70	24	

CP0603D****BS



3

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

LifeElectronics
Живое партнерство

ООО «ЛайфЭлектроникс» **“LifeElectronics” LLC**

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

Тел: +7 (812) 336 43 04 (многоканальный)
Email: org@lifeelectronics.ru

www.lifeelectronics.ru