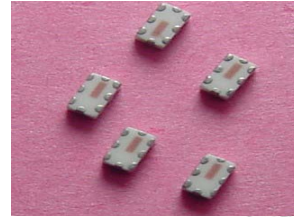


Multilayer Chip Couplers

Features

- Monolithic SMD with small, low-profile and light-weight type.
- High harmonics rejection.



Applications

- 0.8-6 GHz wireless communication systems, including DECT/PACS/PHS/GSM/DCS/PCS phones etc.

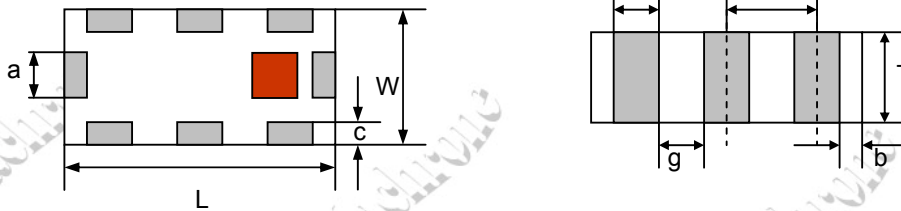
Part Number Systems

MCD - 2012 - 19 - E - 0918 - LF

(1) (2) (3) (4) (5) (6)

(1)	Product series	(2)	Dimensions (L x W): 2.0 x 1.25 mm
(3)	Coupling: 19E = 19/14 dB	(4)	Material code
(5)	Frequency Range: 0897 = 897MHz	(6)	ROHs Compliant

Shape And Dimensions



Unit: mm

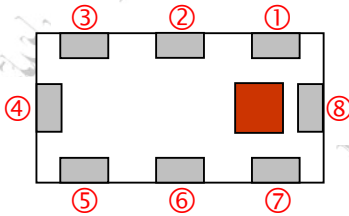
Type	L	W	T	a	b	c	g	p
2012	2.0 ± 0.1	1.25 ± 0.1	0.85 ± 0.1	0.3 ± 0.1	0.2 ± 0.1	0.3 + 0.1/-0.2	0.35 ± 0.1	0.65 ± 0.05

Multilayer Chip Couplers

MCD-2012-Series		ELECTRICAL CHARACTERISTICS			
Part Number	Frequency Range (BW) (MHz)	Insertion Loss @ BW (dB)	Coupling (dB)	Characteristic Impedance (Ω)	
MCD-2012-19-E-0918-LF	Band 1: 880 ~ 915	0.35 Max	19 \pm 1.0	50	
	Band 2: 1710 ~ 1785	0.45 Max	14 \pm 1.5		
	Isolation (dB)	Band 1 (IN) \longrightarrow Band 2 (OUT)			35 Min
		Band 1 (IN) \longrightarrow Band 2 (IN)			24 Min
		Band 1 (OUT) \longrightarrow Band 2 (IN)			24 Min
Band 1 (IN) \longrightarrow Terminated				24 Min	
	Band 2 (IN) \longrightarrow Terminated			24 Min	
Power Capacity	Band 1			3.2W Max. (50 Ω Load)	
	Band 2			1.5W Max. (50 Ω Load)	
V.S.W.R	Band 1/ Band 2 (IN/OUT)			1.5 Max	
	Terminated/Coupled Outs			1.8 Max	

* All specifications are subjected to change without prior notice.

Terminal Configuration

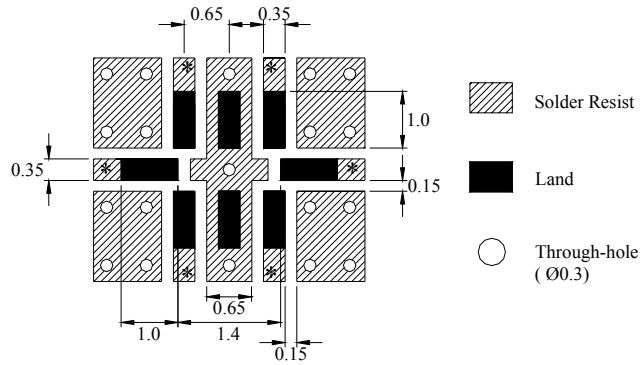


No.	Terminal Name	No.	Terminal Name
1	Band 1 In (Port 1)	5	Band 2 Out (Port 4)
2	GND	6	GND
3	Band 2 In (Port 3)	7	Band 1 Out (Port 2)
4	Termination (Port 6)	8	Coupling Out (Port 5)

Multilayer Chip Couplers

Recommended PC Board Pattern (Unit: mm)

❖ MCD-2012-19-E-0918-LF

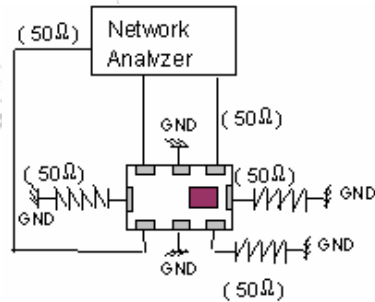


* Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

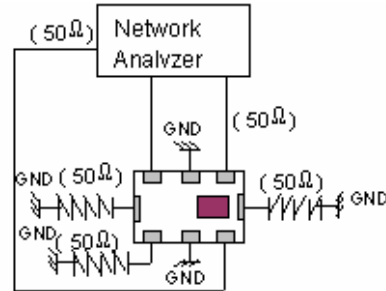
Measuring Diagram

❖ MCD-2012-19-E-0918-LF

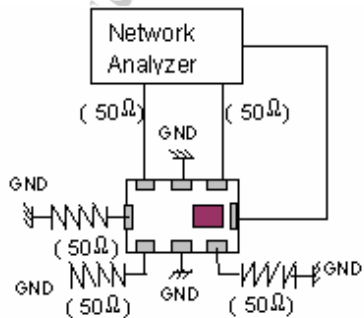
(A) Measuring S11, S33, S44, S41, S43*



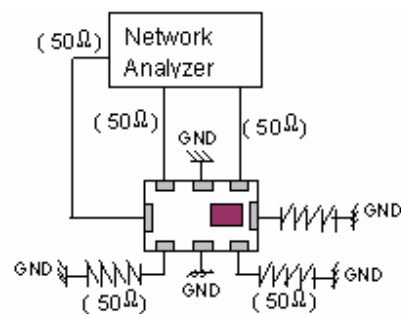
(B) Measuring S21, S22, S32*



(C) Measuring S51, S53, S55*



(D) Measuring S61, S63, S66*



Multilayer Chip Couplers

Typical electrical Characteristics (Temperature = 25°C)

❖ MCD-2012-19-E-0918-LF

