

Description

The YCPD060 is a low temperature co-fired ceramic (LTCC) directional coupler designed for high performance in various applications. The small part size allows for high density PCB layout and provide excellent solderability.



Applications

- ◆ 5G/6G applications
- ◆ Narrow & Wideband amplifiers
- ◆ Factory and Process automation
- ◆ Test Instrumentation
- ◆ Satellite communication

Features

- ◆ 5800 – 7200GHz
- ◆ Mean Coupling 20dB
- ◆ Low Insertion Loss
- ◆ Gold Plating Finish
- ◆ Surface Mount Type

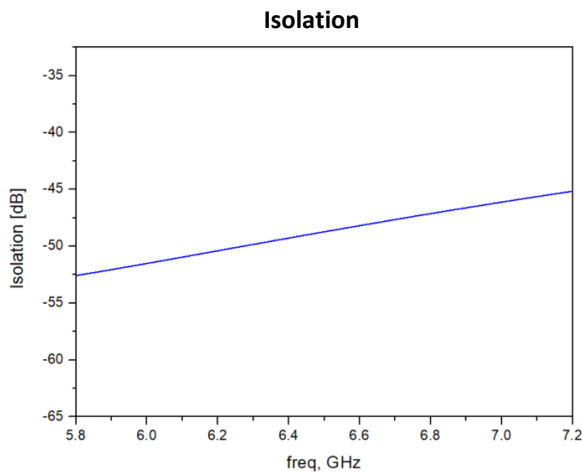
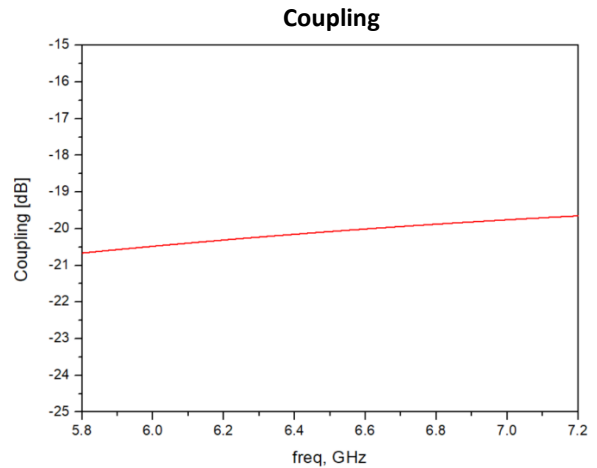
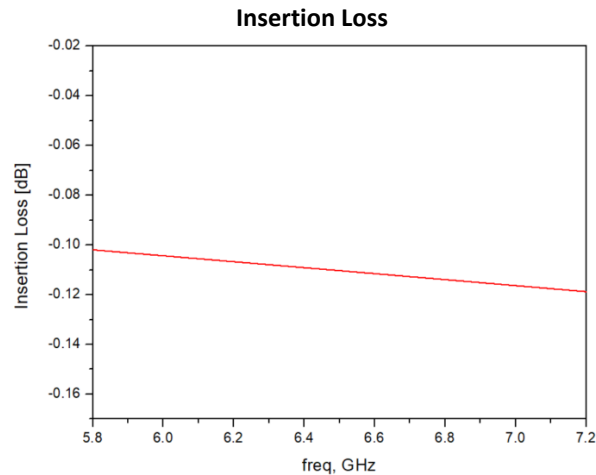
Electrical Specification

Parameter ¹⁾	Specification			Conditions	Unit
	Min.	Typ.	Max.		
Frequency	5800	-	7200	-	MHz
Coupling	-	20	-	-	dB
Insertion Loss	-	0.15	-	-	dB
Return Loss	-	20	-	-	dB
Isolation	-	40	-	-	dB
Power Capacity	-	3	-	-	W
Operation Temperature Range	-55	-	+125	-	°C

Notes:

1) Ta = 25°C, 50Ω system, unless otherwise noted.

Performance Plots



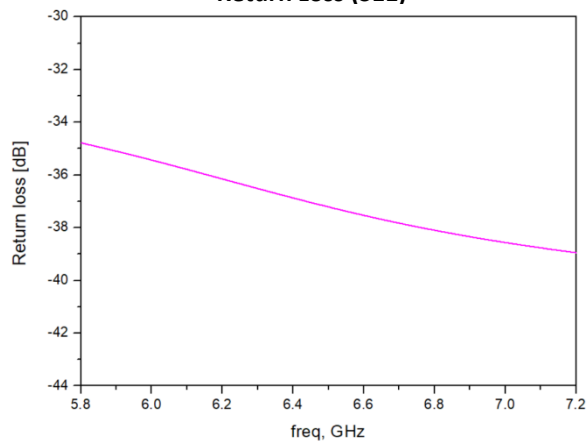
Notes:

1. Return Loss through Port 1 to Port 1 (S11,S22,S33,S44)
2. Coupling through Port 1 to Port 4 (S41)
3. Transmission through Port 1 to Port 2 (S21)
4. Isolation through Port 1 to Port 3 (S31)
5. Directivity (S31-S41)
6. Insertion Loss and Amplitude Balance is function of the below mathematical formula.

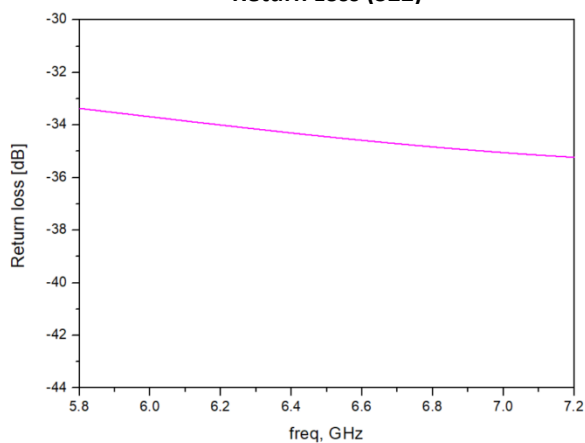
Parameter	Mathematical formula
Insertion Loss (dB)	$10 \cdot \log \left[\frac{P_{in}}{P_{cou} + P_{out}} \right]$

Performance Plots

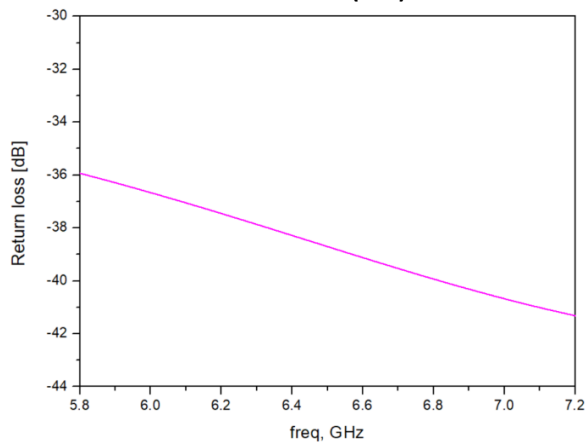
Return Loss (S11)



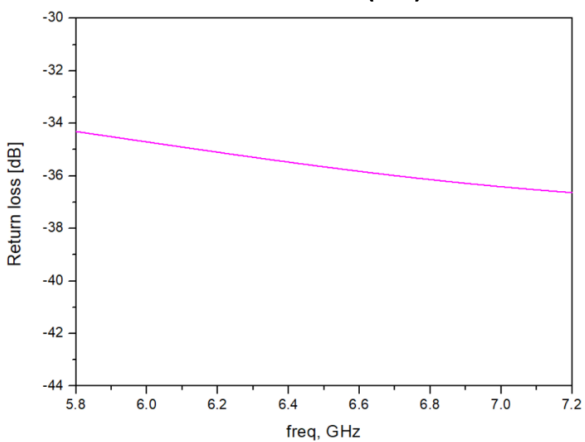
Return Loss (S22)



Return Loss (S33)



Return Loss (S44)



Recommended Operating Condition

Parameter	Min	Typ	Max	Units
Operating Temperature	-55	25	125	°C
Storage Temperature	-20		35	°C

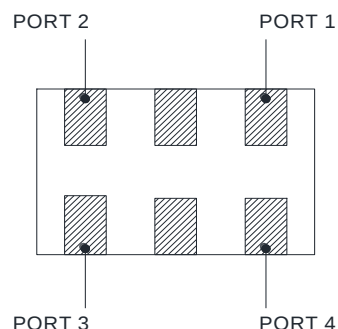
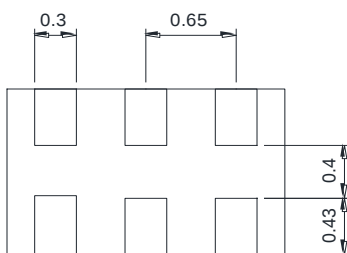
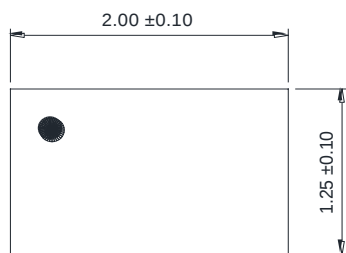
Notes:

1) Storage Temperature Range before soldering in taping package.

Absolute Maximum Ratings

Parameter	Rating	Units
Input Power (AVG/CW)	2	W

Package Outline Drawing



Unit : mm
Tolerance : +/- 0.15

Port Configuration

Configuration	Port 1	Port 2	Port 3.	Port 4
Case 1	Input	Output	Isolated	Coupling
Case 2	Isolated	Coupling	Input	Output
Case 3	Output	Input	Coupling	Isolated
Case 4	Coupling	Isolated	Output	Input