

The TDC2500E10 is a low profile, high performance 10dB directional coupler. It is designed for DCS & PCS applications. This component is suitable for feed-forward amplifier and signal sampling circuits where low insertion loss, high directivity is required. It can be used in power applications up to 100 Watts.

Parts have been subjected to rigorous qualification testing and they are using materials with coefficients of thermal expansion (CTE) compatible with common substrates such as FR4, G-10, RF-35, R04350B and polyimide.

Features:

- . 1700-2800 MHz
- . DCS & PCS
- . Low Insertion Loss
- . High Directivity
- . Low VSWR
- . Good Repeatability
- . CTE compatible with FR4, G-10, RF-35, R04350B and polyimide
- . Immersion gold, prevent surface oxidation & scratch
- . RoHS Compliant
- . Tape & Reel Package available

Electrical Specifications

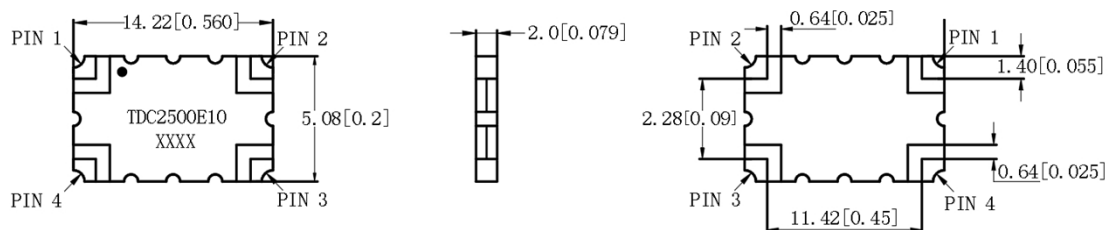
Frequency	Forward Coupled	Insertion Loss	VSWR	Directivity
MHz	dB	dB Max	Max:1	dB Min
1700-2800	10±1.0	0.15	1.20	20.0
Power	Size	Thickness	Operating Temp.	
Avg.CW.Watts	mm	mm	°C	
100	14.22*5.08	2.0	-55 to+105	

Mechanical Outline

TOP VIEW

SIDE VIEW

BOTTOM VIEW





TDC2500E10

Directional Coupler

Rev A1.0

Hybrid Coupler Pin Configuration

The TDC2500E10 has an orientation marker to denote Pin 1. Once port one has been identified the other ports are known automatically. Please see the chart below for clarification:



Pin 1	Pin 2	Pin 3	Pin 4
Input	Transmission	Isolate	Coupling
Transmission	Input	Coupling	Isolate

Typical Performance Data

Frequency	MHz	1700	1850	2000	2150	2250	2350	2500	2650	2800
Coupling	dB	-10.63	-10.28	-10.03	-9.88	-9.83	-9.79	-9.82	-9.95	-10.18
Transmission	dB	-0.48	-0.48	-0.46	-0.50	-0.60	-0.54	-0.56	-0.57	-0.55
Insertion Loss	dB	-0.09	-0.06	-0.01	-0.03	-0.12	-0.06	-0.08	-0.11	-0.11
Directivity	dB	-24.00	-24.61	-25.43	-26.42	-27.23	-28.31	-30.03	-32.22	-34.91
VSWR	Input	/	1.17	1.17	1.17	1.17	1.16	1.15	1.14	1.09
	Transmissi on	/	1.16	1.16	1.16	1.15	1.14	1.13	1.11	1.06
	Isolate	/	1.02	1.03	1.05	1.06	1.08	1.09	1.12	1.18
	coupling	/	1.04	1.05	1.06	1.07	1.08	1.08	1.09	1.12

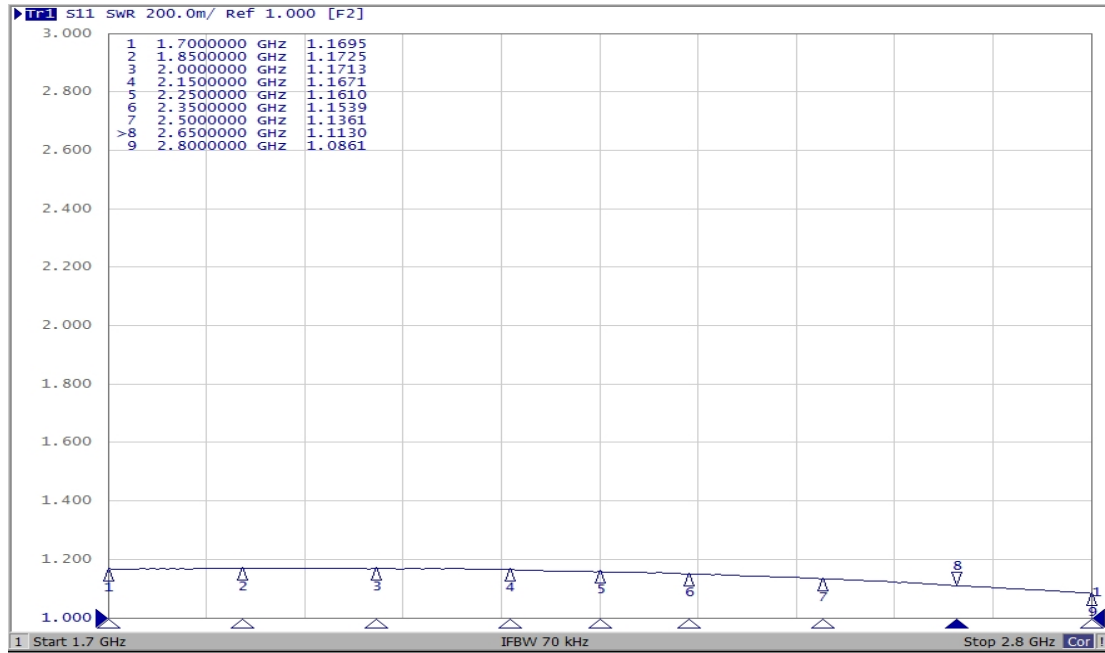


TDC2500E10

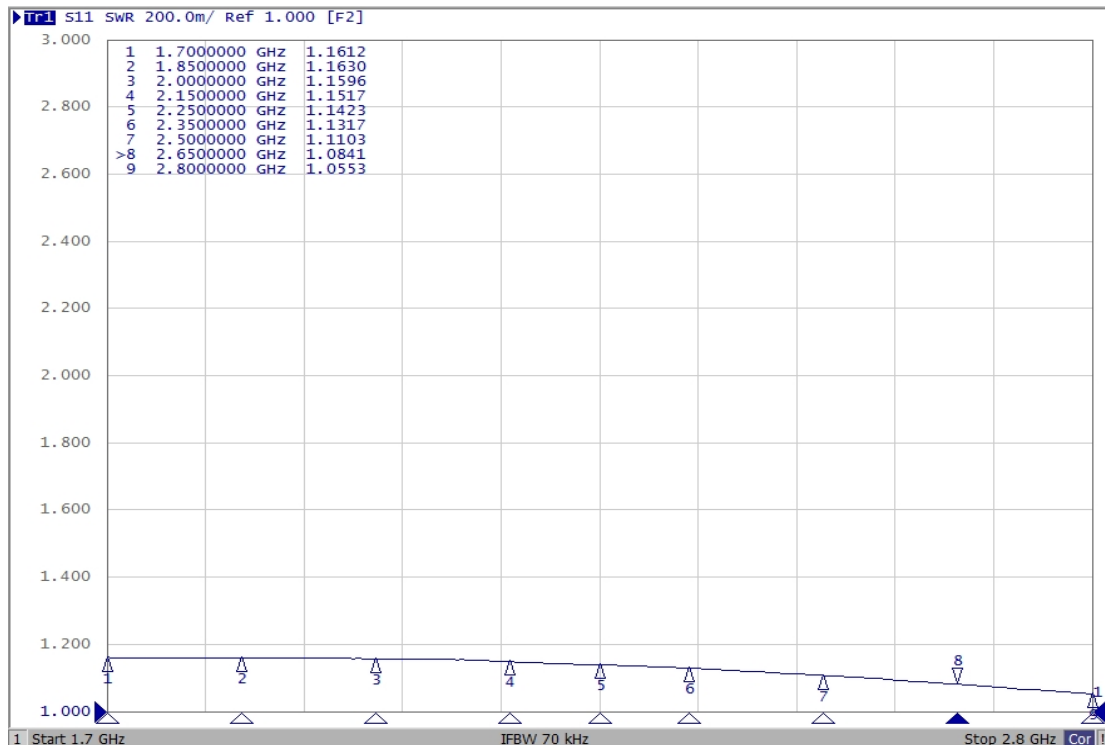
Directional Coupler

Rev A1.0

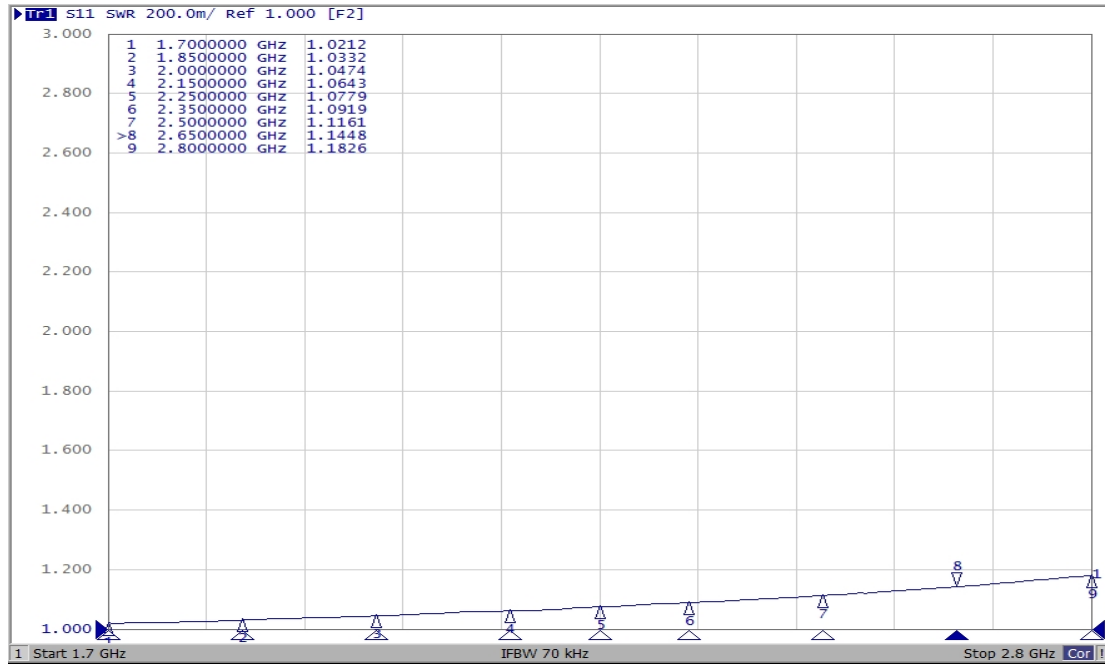
Port 1 驻波:



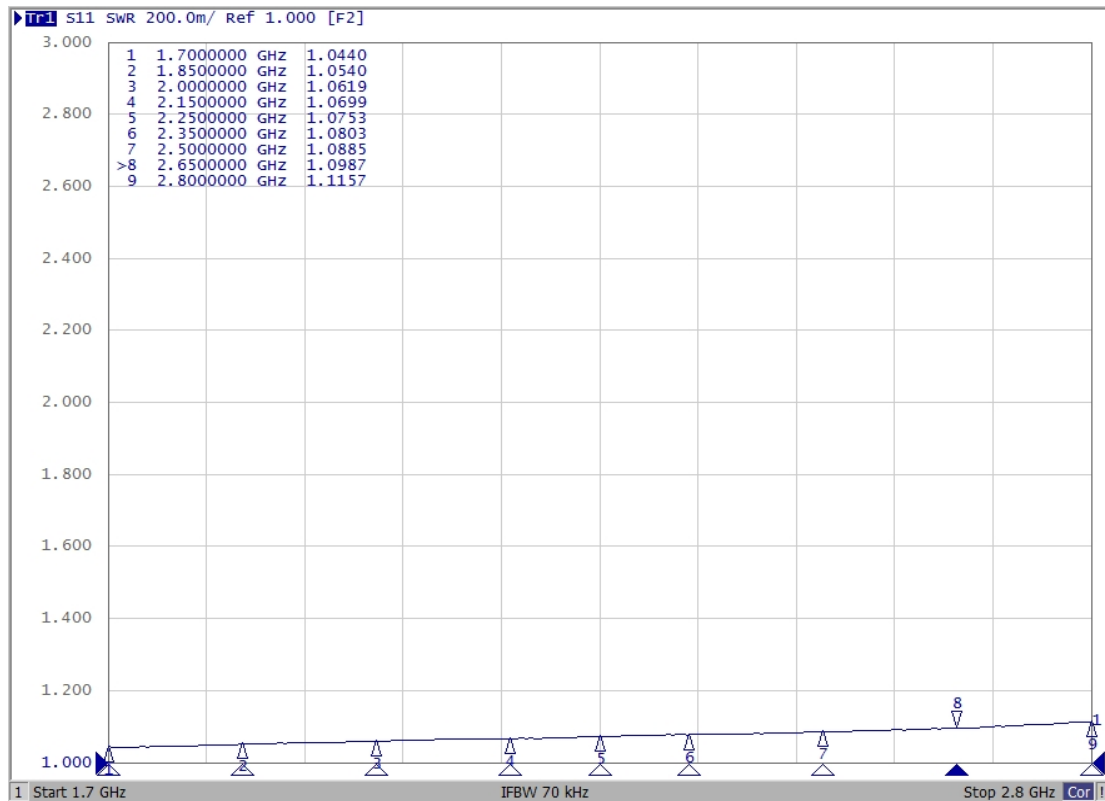
Port 2 驻波:



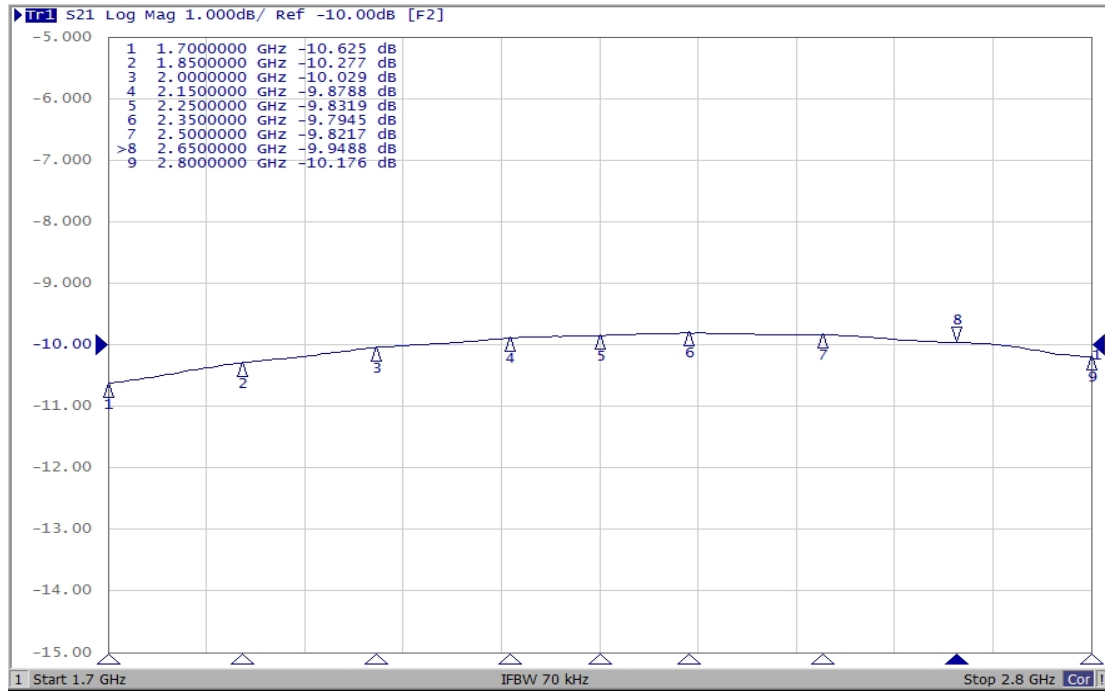
Port 3 驻波:



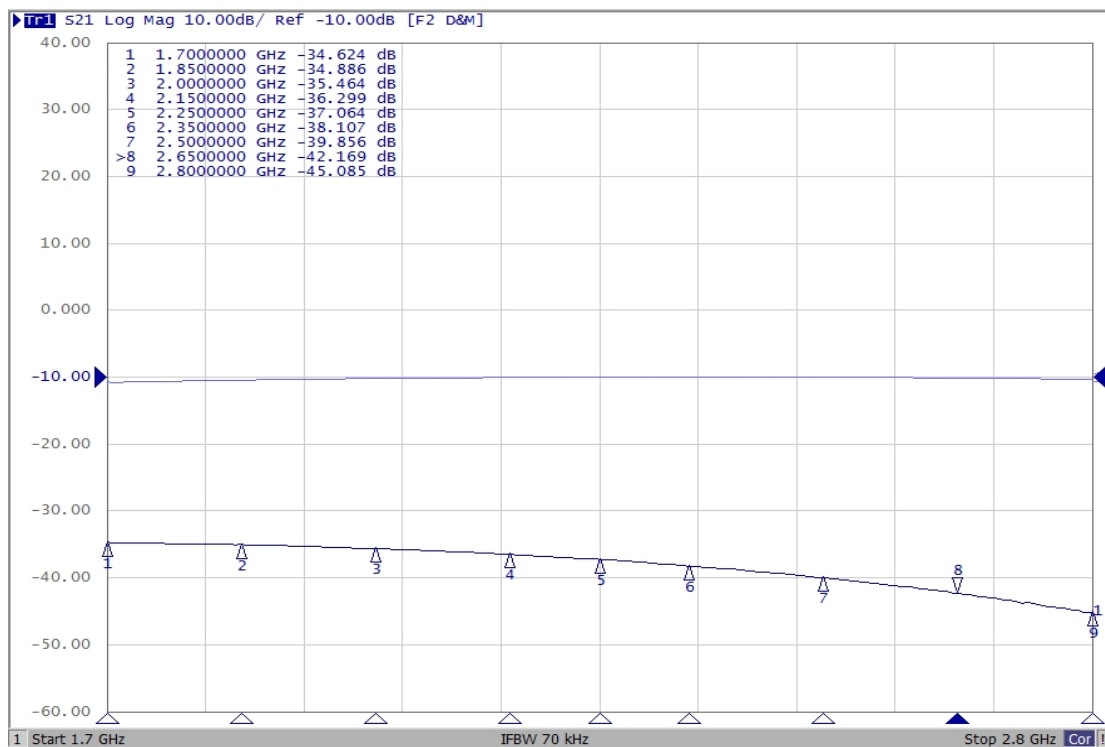
Port 4 驻波:



Coupling(dB):



Isolation (Port 1 feeding):



Transmission (dB):

