

The TDC1700B30 is a low profile, high performance 30dB 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 150 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:

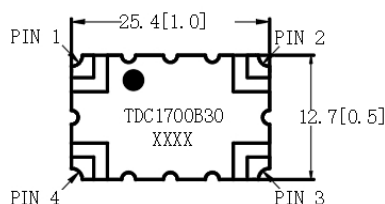
- . 680-2700 MHz
- . DCS & PCS
- . Low Insertion Loss
- . High Directivity
- . Low VSWR
- . Good Repeatability
- . CTE compatible with FR4, G-10, RF-35, R04350B and polyimide
- . Immersion gold, prevent surface oxidation & scratch
- . RoHS Compliant
- . Tape & Reel Package available

Electrical Specifications

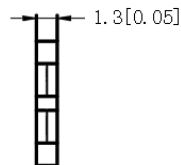
Frequency	Forward Coupled	Insertion Loss	VSWR	Directivity
MHz	dB	dB Max	Max:1	dB Min
680-2700	30±1.0	0.20	1.15	23.0
Power	Size	Thickness	Operating Temp.	
Avg.CW.Watts	mm	mm	°C	
150	25.4*12.7	1.3	-55 to+105	

Mechanical Outline

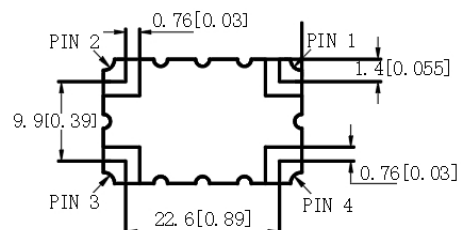
TOP VIEW



SIDE VIEW



BOTTOM VIEW





TDC1700B30

Directional Coupler

Rev A1.0

Hybrid Coupler Pin Configuration

The TDC1700B30 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	Direct	Isolated	Coupled
Direct	Input	Coupled	Isolated
Isolated	Coupled	Input	Direct
Coupled	Isolated	Direct	Input

Typical Performance Data

Frequency		MHz	680	950	1200	1450	1700	1950	2200	2450	2700
Coupling		dB	-30.29	-29.15	-29.22	-29.96	-30.62	-30.56	-30.04	-29.81	-30.43
Transmission		dB	-0.04	-0.06	-0.06	-0.09	-0.09	-0.11	-0.13	-0.14	-0.11
Insertion Loss		dB	-0.04	-0.06	-0.06	-0.09	-0.09	-0.11	-0.13	-0.14	-0.11
Directivity		dB	-28.45	-28.05	-28.90	-32.22	-32.20	-28.19	-26.08	-25.53	-25.60
VSWR	1	/	1.03	1.03	1.04	1.05	1.05	1.03	1.01	1.05	1.13
	2	/	1.03	1.03	1.05	1.06	1.07	1.06	1.03	1.05	1.12
	3	/	1.03	1.03	1.03	1.03	1.04	1.04	1.04	1.07	1.11
	4	/	1.02	1.02	1.04	1.05	1.06	1.05	1.03	1.06	1.12

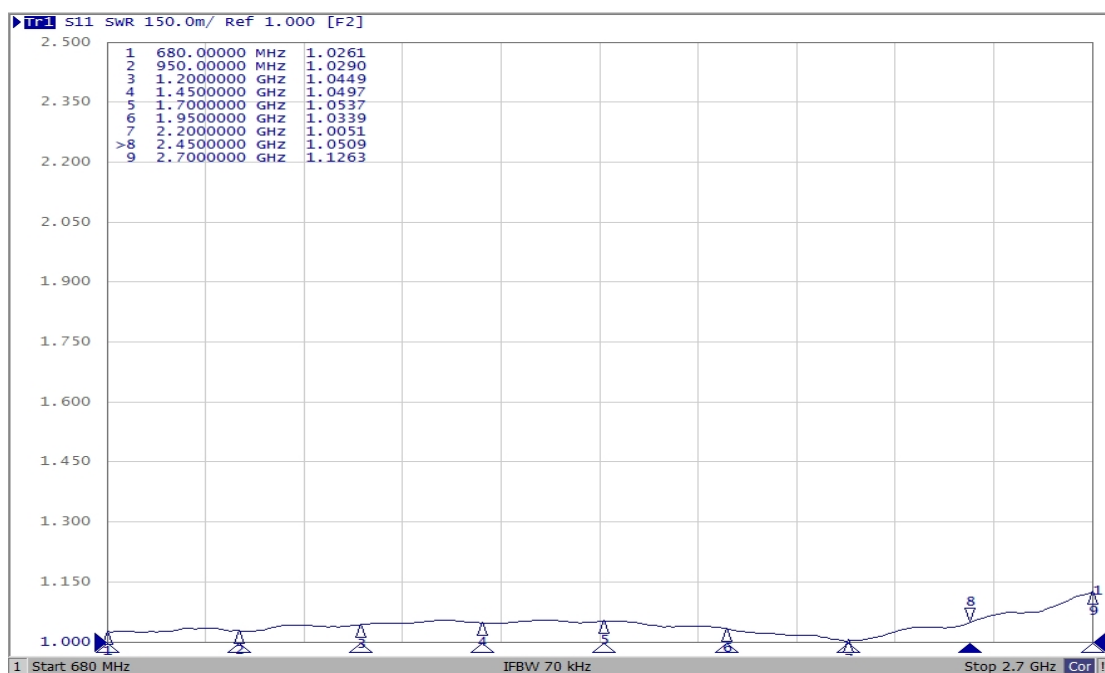


TDC1700B30

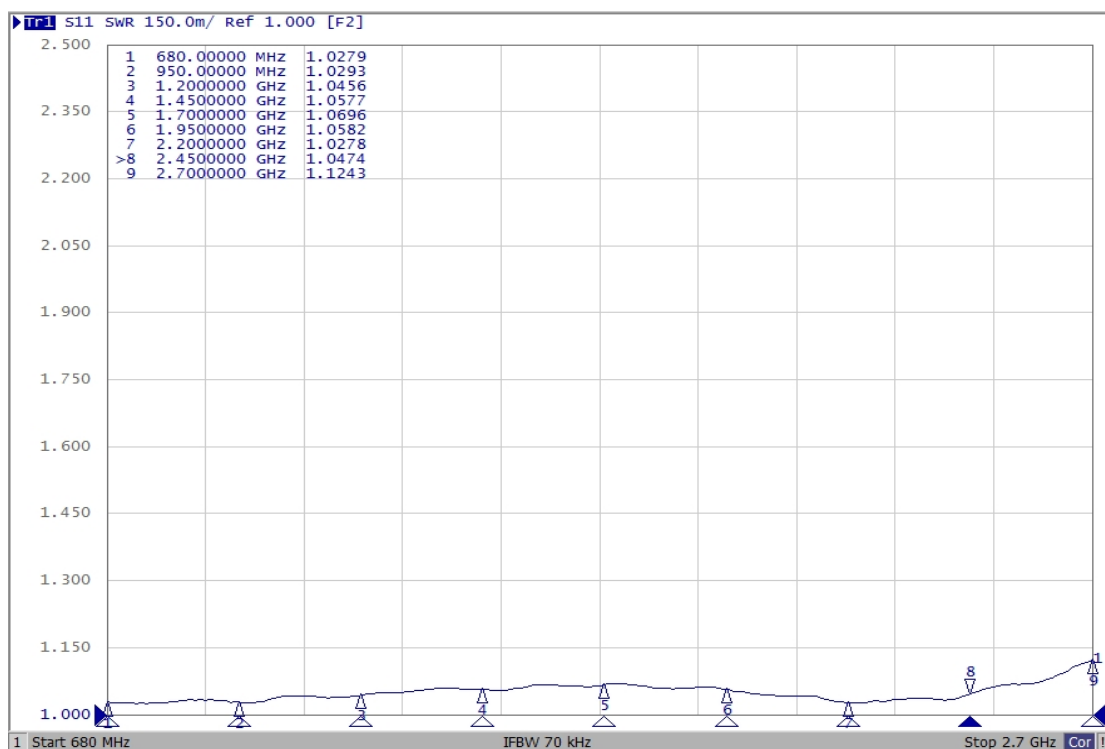
Directional Coupler

Rev A1.0

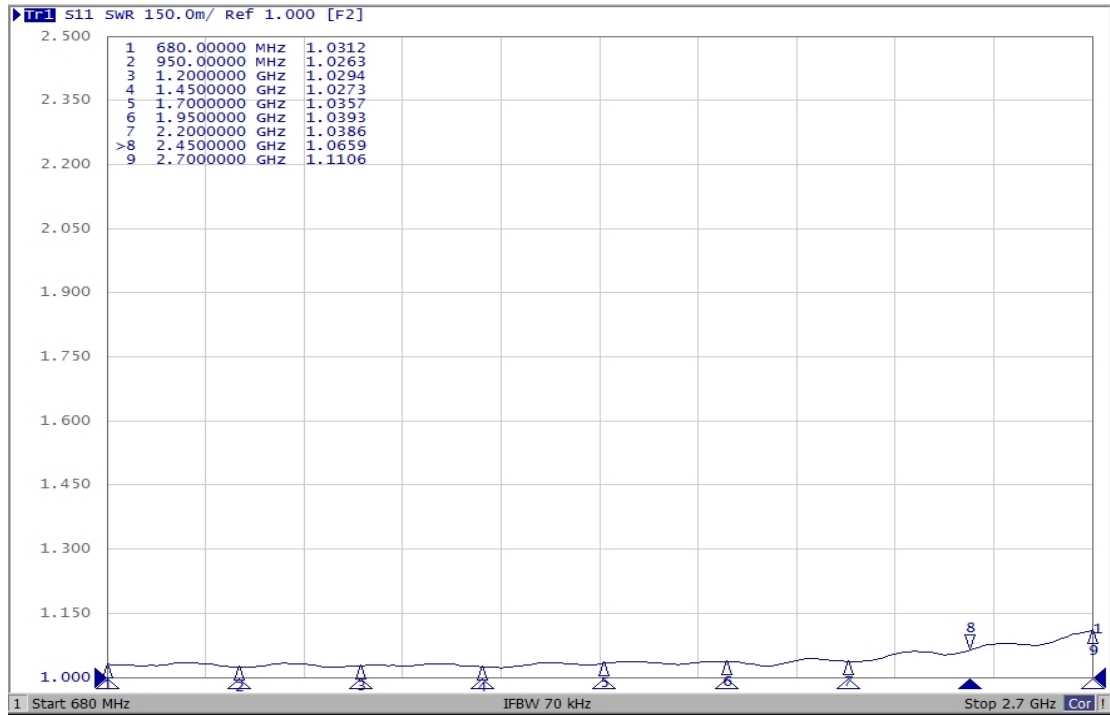
VSWR 1:



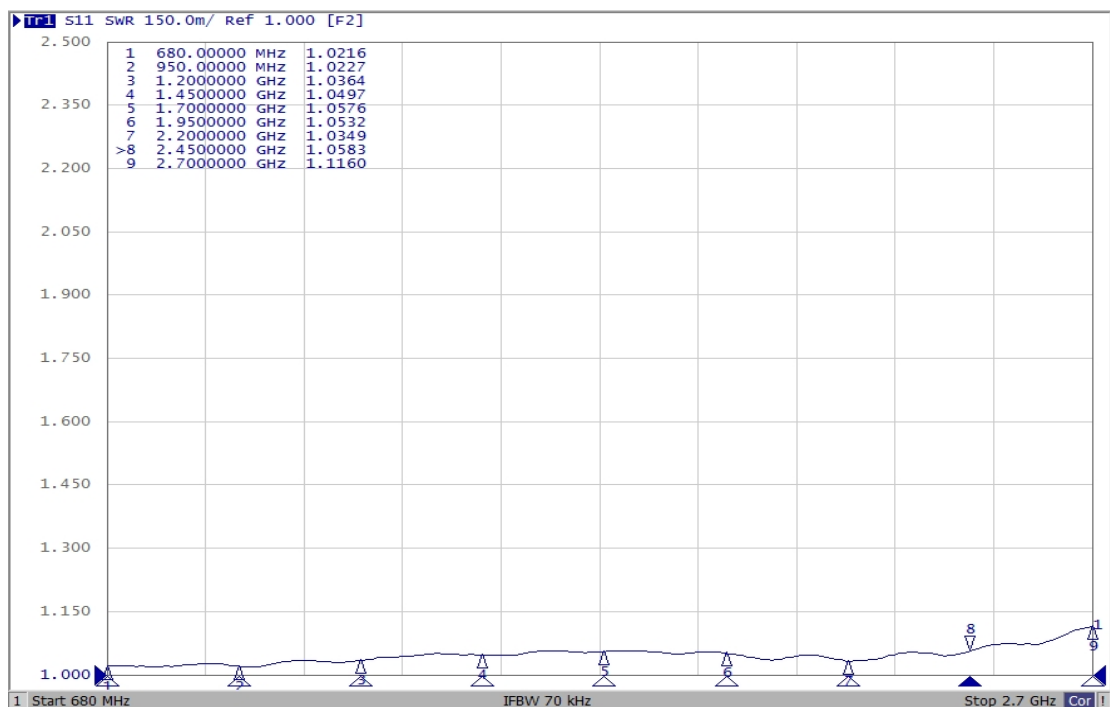
VSWR 2:



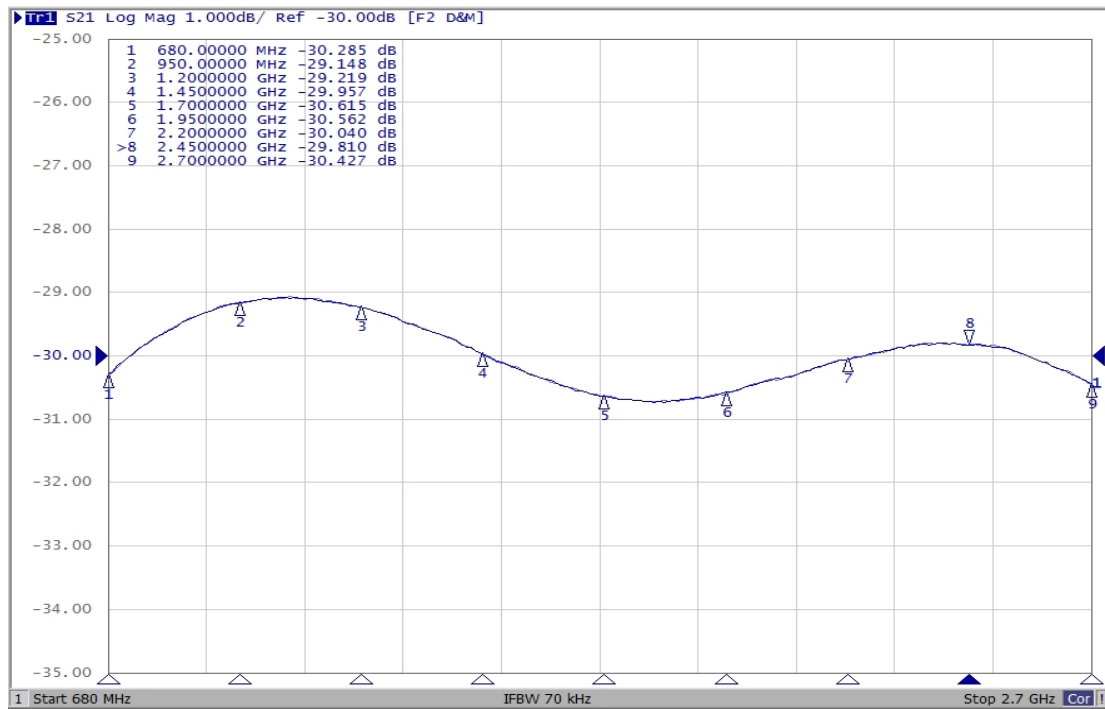
VSWR 3:



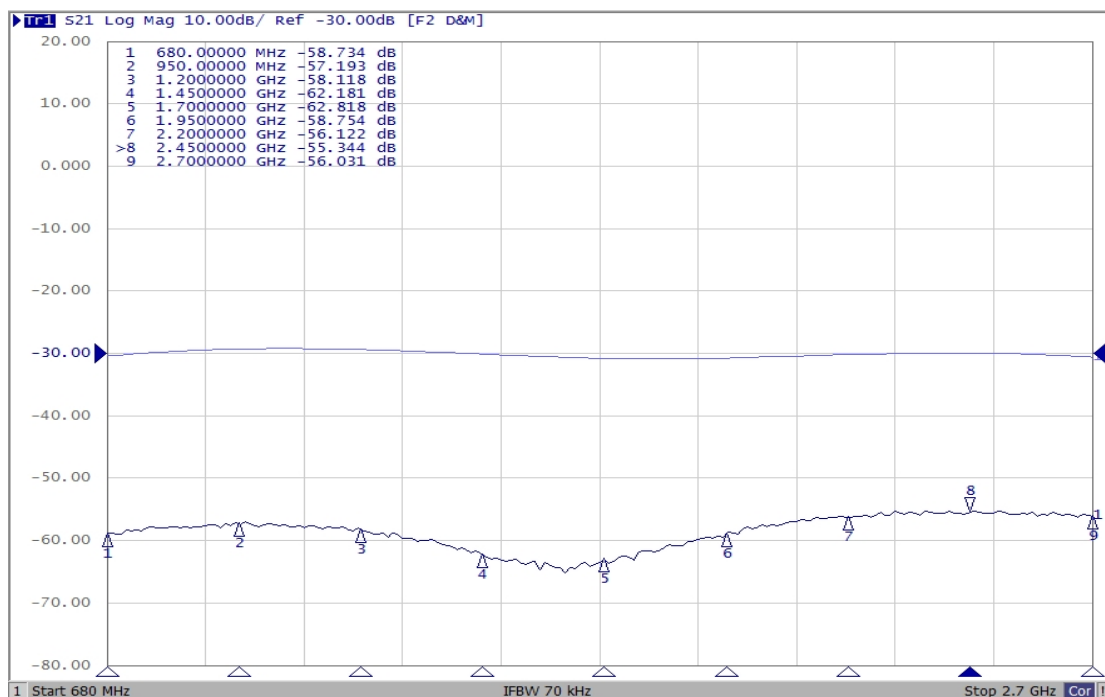
VSWR 4:



Coupling:



Isolation:



Insertion Loss:

