

DATASHEET

PART NO: 174300MQ

UHF SIGNAL ENHANCEMENT RF COUPLER



RF Line Taps are available in three or four port versions, factory tuned per application. Input power is the sum of the output power and the tapped power. These bi-directional line taps handle up to 250W power with coupler lengths corresponding to the operating frequency for unmatched efficiency and reliability.

FEATURES

- Available in VHF, UHF, 700, 800, 900 MHz
- Up to 250 Watts power
- Excellent Impedance Match
- Field Adjustable

Typical Tap Setting

Through line loss vs Frequency

450 – 512 MHz		758 – 861 MHz	
Tap Setpoint	Thru Loss	Tap Setpoint	Thru Loss
4 dB	2.9 dB	4.4 dB	2.7 dB
6 dB	1.2 dB	5.7 dB	1.2 dB
10 dB	0.42 dB	8.5 dB	1.60 dB
15 dB	0.25 dB	11.5 dB	0.7 dB
20 dB	0.06 dB	15.2 dB	0.19 dB
25 dB	0.04 dB	20.5 dB	0.12 dB

380 – 420 MHz		450 – 512 MHz		758 – 861 MHz	
Tap Setpoint	Thru Loss	Tap Setpoint	Thru Loss	Tap Setpoint	Thru Loss
4 dB	2.9 dB	4.2 dB	2.8 dB	4.3 dB	2.75 dB
6 dB	1.2 dB	6.5 dB	1.5 dB	4.3 dB	2.75 dB
10 dB	0.42 dB	9.5 dB	1.60 dB	5.5 dB	1.75 dB
15 dB	0.25 dB	14.5 dB	0.63 dB	8.0 dB	0.80 dB
20 dB	0.06 dB	18.8 dB	0.16 dB	13.0 dB	0.16 dB
25 dB	0.04 dB	24.0 dB	0.08 dB	16.3 dB	0.10 dB

ELECTRICAL SPECIFICATIONS

Frequency	300 - 861 MHz
# Tap Point	1
Input Power (Max.)	250 W
Coupling Range	See Table Below
Coupling Tolerance	+/- 1.0 dB
Through line VSWR	1.5:1, max
VSWR (Max.)	1.5:1
Impedance (Nom.)	50 Ω
Connectors	N Female

MECHANICAL SPECIFICATIONS

Finish	Gray
Dimensions (H x W x D)	44 x 112 x 28 mm (1.75 x 4.425 x 1.1 inches)
Net Weight	0.4 kg (0.85 lbs)
Shipping Weight	0.9 kg (2 lbs)

ENVIRONMENTAL SPECIFICATIONS

Application	Indoor
Operating Temp. Range	-20 to +50 °C
Storage Temp. Range	-40 to +100 °C
Operating Humidity Range	90 % Non-condensing

Power Distribution ratio Thru Line : Tapped Port

3 dB to Tapped Port	50:50
4 dB to Tapped Port	60:40
5 dB to Tapped Port	68:32
6 dB to Tapped Port	75:25
7 dB to Tapped Port	80:20
8 dB to Tapped Port	74:16
9 dB to Tapped Port	87:13
10 dB to Tapped Port	90:10
15 dB to Tapped Port	97:3
20 dB to Tapped Port	99:1
25 dB to Tapped Port	99.6:0.4