



## TSC Series

## 1GHz 70/140dB EMI Digital Directional Couplers

- Digital-Ready Broadband 5-1000MHz frequency range
- Standard TSC-series feature epoxysealed back cover plates for effective EMI-RFI shielding >-90dB to reduce signal ingress
- TSC-SB-series feature a solder-back cover-plate to provide maximum EMI-RFI shielding >-140dB eliminating signal ingress and guarantee distortion free pictures
- High tap-to-output isolation provides spurious carrier protection and minimizes undesired channel interaction, reducing picture distortion
- Yellow-chromate plated TSC-series and tin-coated TSC-SB-series over zinc-alloy diecast housing ensures excellent ground bonding and long corrosion-free service life in indoor/outdoor applications
- High-performance printed board circuitry provides low intermodulation distortion to ensure excellent digital performance
- Capacitor coupling circuitry at all ports provide effective DC voltage blocking for improved hum modulation and intermodulation
- 1-inch centered 1/2" long precision machined F-connector threads ensure improved port-to-connector interface and accommodate external security devices
- Internal seizing pins provide improved connectivity to connector center lead
- TSC-series and TSCW-series designed for mounting in TruSpec's BP1 wallplate for easy installation
- Performance tests conducted conforming with SCTE standards IPS TP-201, 202, 203, 403A, 406



### 1GHz 70/140dB EMI Digital Directional Couplers

Manufactured to precise performance standards, TruSpec's TSC-series 1GHz professionalcommercial grade CATV Directional Couplers provide superb performance unsurpassed by competitors' equivalent models. Applications range from residential to MDU installations in international and domestic cable distribution systems. These taps are used in applications requiring the bulk of the signal passing through one port while reduced signal passes from the tapped port. This feature ideally suits TSC-series taps for systems using looped or tree and branched architectures. Our advanced printed board circuitry includes special ferrite core material guaranteeing unsurpassed insertion loss, optimal isolation and return loss performance to 1GHz ensuring high-quality analog or digital signal transfer. All TSC-series F-port threads are precision machined, ensuring easy connector installation and removal, and improved port-to-connector interface. High retention internal seizing pins ensure excellent connectivity to connector center lead. Regular TSC-series back-plates are epoxy-sealed to provide superior RFI shielding >-70dB, while TSC-SB series directional couplers feature a solder-back cover-plate to provide the highest possible EMI-RFI shielding >-140dB eliminating signal ingress and providing a full environmental seal. Both TSC-series feature a thick tin coating over a zinc-alloy diecast housing to ensure excellent corrosion resistance. Each TSC-series directional coupler is fully tested at the factory and certified to SCTE standards.





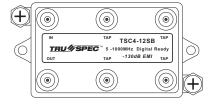
# TSC Series

#### 1GHz 70/140dB EMI Digital Directional Couplers









TSC2 TSC2-SB

TSC4 TSC4-SB

## **Specifications**

#### TSC, TSC-SB, TSCW and TSCW-SB Series

 Tap Loss (± .6dB):
 6,9,12,16,20,24,27,30 dB

 Insertion Loss (In-Out):
 1.3 dB Typical

 Return Loss (Output):
 22 dB Typical

 Isolation (Tap-Out):
 35 dB Typical

**TSC Dimensions:**  $2.0''(L) \times 1.9''(W) \times 0.5''(H)$  **TSCW Dimensions:**  $2.0''(L) \times 1.9''(W) \times 0.5''(H)$ 

#### TSC2 and TSC2-SB Series

 Tap Loss (± .6dB):
 6,9,12,16,20,24,27,30 dB

 Insertion Loss (In-Out):
 1.7 dB Typical

 Return Loss (Output):
 22 dB Typical

 Isolation (Tap-Out):
 35 dB Typical

**Dimensions:** 1.5"(L) x 1.7"(W) x 1.1"(H)

#### **TSC4** and **TSC4-SB** Series

 Tap Loss (± .6dB):
 8\*,12,16,20,24,30 dB

 Insertion Loss (In-Out):
 1.5 dB Typical

 Return Loss (Output):
 24 dB Typical

 Isolation (Tap-Out):
 30 dB Typical

 Dimensions:
 3.0"(L) x 1.6"(W) x 1.1"(H)

NOTE: \*8dB tap has terminated feed thru

#### **INSERTION LOSS Typical**

► 1:Transmission	Log Mag	1.0 dB/ Ref 0.00 dB			С
dB		Meas1:	Mkr8	1000.00	
3				1.0	, ub
2					
1					
1:▶					
1		~~~~			<u> </u>
2					
-3					
4					
-5					
Start 5.000 Mhz			Stop 1	000.00	0 Mhz

## **Ordering Information**

1-Port 70dB EMI Epoxy-Backed Tap Values: 6, 9, 12, 16, 20, 24, 27, 30dB TSC2 - dB Tap Value TSCdB Tap Value 2-Port 70dB EMI Epoxy-Backed Tap Values: 6,9, 12, 16, 20, 24, 27, 30dB dB Tap Value -SB 1-Port 130dB EMI Solder-Backed Backed TSC2 - dB Tap Value -SB 2-Port 130dB EMI Solder-Backed Tap Values: 6, 9, 12, 16, 20, 24, 27, 30dB Tap Values: 6,9, 12, 16, 20, 24, 27, 30dB 1-Port 70dB EMI Epoxy Wall-Plate Mount Tap Values: 6, 9, 12, 16, 20, 24, 27, 30dB 4-Port 100dB EMI Epoxy-Backed Tap Values: 8, 12, 16, 20, 24, 30dB TSCW - dB Tap Value TSC4 - dB Tap Value TSCW - dB Tap Value -SB 1-Port 130dB EMI Solder Wall-Plate Mount TSC4 - dB Tap Value -SB 4-Port 130dB EMI Solder-Backed Tap Values: 6, 9, 12, 16, 20, 24, 27, 30dB Tap Values: 8, 12, 16, 20, 24, 30dB

Specifications Subject to Change

© Copyright 2003 Pico Macom, Inc.

