

# 1 GHz HARD LINE 2 PORTS EQUALIZABLE TAPS



## MODEL: NCMSMT2-XXSG/EQ

### Description

The NCM Equalizable Tap is a smart alternative to optimize today's CATV networks and add flexibility to the standard drop passive equipment.

With the addition of pluggable components (EQ, IEQ and RA) the Cable Operator has the facility to configure the taps in the field according to the network design necessity.

### Features

- Aluminum alloy housing
- Neoprene weather gasket
- Double polyurethane coating
- RF interference gasket
- Rotational seizure mechanism for aerial or pedestal installation
- Uninterrupted power and RF passing connector
- 5 – 1000 MHz bandwidth capacity
- Optional Plug-In's Forward EQ, Inverse EQ and Return Attenuator



### Specifications

GENERAL SPECIFICATIONS				
	FREQUENCY (MHz)	VALUE	UNIT	STANDARD
Power Passing	-	12	A	ANSI/SCTE 144 2012
Tap-Tap Isolation (min)	5-50	20	dB	
	51-750	22	dB	
	751-1000	20	dB	
In-Out Return loss (min)	5-1000	16	dB	ANSI/SCTE 16 2012
Tap Return Loss (min)	5-1000	16	dB	
Hum Modulation @ 10 A (typ)	5-450	70	dBc	
	451-750	65	dBc	
	750-1000	55	dBc	
EMI Shielding (min)	5-15	85	dB	ANSI/SCTE 48-2 2008
	16-1000	100	dB	
In-Out Surge Resistance	-	6	kV	IEEE C62.41 (CAT B3)
Tap Surge Resistance	-	6	kV	IEEE C62.41 (CAT A3)

Unless otherwise noted, the above specifications reflect typical device performance at stated reference levels in the recommended operating configuration(s). Specifications are subject to change without notice.

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MECHANICAL SPECIFICATIONS STANDARD PROFILE HOUSING			
	UNIT	VALUE	STANDARD / NOTES
Height	in - (mm)	3.6 – (91.44)	-
Width	in - (mm)	3.6 – (91.44)	-
Depth	in - (mm)	3.0 – (76.2)	-
In-Out Port	in	5/8-24 Female	ANSI/SCTE 91 2015
Housing Closure Bolt	in	3/8 Hex Head	50 to 60 in-lb (5.6 to 6.8 Nm) Torque
Seizure Screws	in	3/16 Hex Head	15 to 20 in-lb (1.7 to 2.3 Nm) Torque

IN-OUT INSERTION LOSS	TAP VALUE	FREQUENCY (MHz)															
		5		150		300		450		550		750		870		1000	
(dB)		Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
	8	3.2	3.6	3.3	3.6	3.4	3.7	3.8	4.1	4.2	4.2	4.6	5.1	4.7	5.2	5.1	5.4
	11	1.6	2.1	1.6	2.0	1.7	2.0	1.7	2.1	2.0	2.2	2.1	2.3	2.5	2.8	3.3	3.5
	14	0.8	1.1	0.8	1.1	0.9	1.2	1.0	1.3	1.3	1.6	1.7	2.0	2.3	2.6	2.8	3.1
	17	0.7	1.0	0.7	1.0	0.8	1.1	0.9	1.2	1.0	1.3	1.3	1.6	1.5	1.8	1.9	2.4
	20	0.5	0.8	0.7	1.0	0.7	1.0	0.9	1.2	0.9	1.2	1.1	1.4	1.3	1.6	1.8	2.1
	23	0.4	0.7	0.6	0.9	0.7	1.0	0.9	1.2	0.9	1.2	1.2	1.4	1.3	1.6	1.8	2.1
	26	0.4	0.7	0.6	0.9	0.7	1.0	0.9	1.2	0.9	1.2	1.1	1.4	1.3	1.6	1.8	2.1
	29	0.4	0.7	0.6	0.9	0.7	1.0	0.9	1.2	0.9	1.2	1.1	1.4	1.3	1.6	1.8	2.1

TAP LOSS TOLERANCE	TAP VALUE	FREQUENCY (MHz)							
		5	150	300	450	550	750	870	1000
± (dB)	4	1.2	1.2	1.2	1.2	1.3	1.3	1.6	1.8
	8	1.2	1.2	1.2	1.2	1.2	1.5	1.5	1.9
	11	1.3	1.2	1.2	1.2	1.2	1.2	1.4	1.8
	14	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.5
	17	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.5
	20	1.4	1.2	1.2	1.2	1.2	1.3	1.3	1.5
	23	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.5
	26	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.5
29	1.6	1.2	1.2	1.2	1.2	1.5	1.5	1.5	

BYPASS SPECIFICATIONS											
	UNIT	VALUE	STANDARD / NOTES								
System Open Circuit Time	ms	0	-								
Contact Resistance (max)	mΩ	10	-								
Current Rating	A	12	-								
Voltage Rating	VAC	90	-								
Frequency Range	MHz	5-1000	-								
Operating Temperature	°C	-40 to +60	-								
BYPASS INSERTION AND RETURN LOSS (dB)											
	5 MHz		500 MHz		750 MHz		870 MHz		1000 MHz		
	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	
Insertion Loss	0.1	0.2	0.5	0.6	0.5	0.6	0.6	0.7	0.7	0.8	
Return Loss	43	35	18	16	18	16	18	16	18	16	

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OUT TO TAP ISOLATION		FREQUENCY (MHz)					
		5-50	51-550	551-650	651-750	751-870	871-1000
(Min) (dB)	TAP VALUE						
	8	20	26	24	23	23	22
	11	18	27	27	26	24	23
	14	20	30	28	27	27	25
	17	28	29	30	30	28	26
	20	28	30	30	30	30	25
	23	33	35	34	32	29	26
	26	36	36	36	35	34	30
29	39	36	36	35	32	30	

FWD EQ LOSS		FREQUENCY (MHz)							
		5	42	70	550	650	750	870	1000
(dB)	EQ VALUE								
	3	3.0	2.7	2.2	1.7	1.4	1.2	0.9	0.8
	6	6.2	5.7	5.4	2.5	2.0	1.6	1.1	0.8
	9	9.1	8.1	7.5	3.4	2.8	2.1	1.3	0.8
	12	12.0	10.6	9.8	4.2	3.3	2.5	1.5	0.8

INV EQ LOSS		FREQUENCY (MHz)							
		5	42	70	550	650	750	870	1000
(dB)	EQ VALUE								
	3	0.1	0.1	0.1	1.2	1.5	1.7	2.0	2.6
	6	0.1	0.1	0.2	3.1	4.0	4.4	5.0	5.6
	9	0.1	0.1	0.2	4.8	5.8	6.5	7.4	8.2
	12	0.1	0.1	0.3	7.1	8.4	9.4	10.5	11.4

42/54 RA EQ LOSS		FREQUENCY (MHz)						
		5-42	54	550	650	750	870	1000
(dB)	EQ VALUE							
	3	3	0.8	0.3	0.4	0.5	0.6	0.8
	6	6	0.8	0.3	0.4	0.5	0.6	0.8
	9	9	0.8	0.3	0.4	0.5	0.6	0.8
	12	12	0.8	0.3	0.4	0.5	0.6	0.8

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## MODEL: NCMSMT2-XXSG/EQ

ORDERING INFORMATION		
Part Number	Description	Marking Labels
NCMSMT2-04SG/EQ	NCM 2 Way Equalizable Tap, 4 dB	
NCMSMT2-08SG/EQ	NCM 2 Way Equalizable Tap, 8 dB	
NCMSMT2-11SG/EQ	NCM 2 Way Equalizable Tap, 11 dB	
NCMSMT2-14SG/EQ	NCM 2 Way Equalizable Tap, 14 dB	
NCMSMT2-17SG/EQ	NCM 2 Way Equalizable Tap, 17 dB	
NCMSMT2-20SG/EQ	NCM 2 Way Equalizable Tap, 20 dB	
NCMSMT2-23SG/EQ	NCM 2 Way Equalizable Tap, 23 dB	
NCMSMT2-26SG/EQ	NCM 2 Way Equalizable Tap, 26 dB	
NCMSMT2-29SG/EQ	NCM 2 Way Equalizable Tap, 29 dB	
NCM-T-FEQ-03	NCM TAP Forward Equalizer 3 dB	
NCM-T-FEQ-06	NCM TAP Forward Equalizer 6 dB	
NCM-T-FEQ-09	NCM TAP Forward Equalizer 9 dB	
NCM-T-FEQ-12	NCM TAP Forward Equalizer 12 dB	
NCM-T-IEQ-03	NCM TAP Inverse Equalizer 3 dB	
NCM-T-IEQ-06	NCM TAP Inverse Equalizer 6 dB	
NCM-T-IEQ-09	NCM TAP Inverse Equalizer 9 dB	
NCM-T-IEQ-12	NCM TAP Inverse Equalizer 12 dB	
NCM-T-RA-03	NCM TAP Return Attenuator 3 dB	
NCM-T-RA-06	NCM TAP Return Attenuator 6 dB	
NCM-T-RA-09	NCM TAP Return Attenuator 9 dB	
NCM-T-RA-12	NCM TAP Return Attenuator 12 dB	

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