

DiGiTAL-1™

1GHz CATV Digital Splitter

DiGiTAL-1™

1GHz DiGiTAL-1™ CATV Digital Splitters Series

DiGiTAL-1™ Passives have been engineered and manufactured to provide the highest performance and reliability. They ensure the best quality signal distribution possible for current HDTV, DOCSIS Data, Digital Voice and future interactive Broadband networks. The DiGiTAL-1™ engineering team has a proven 20 year track record in the Broadband Industry and offers the best class in mechanical and consistent RF performance with high quality components and strict QC measures. They are available in a full line of housing configurations.

Features and Benefits

- Consistent, high RF performance from 5-1000MHz through extreme temperatures
- Enhanced 15-42MHz return path for superior output return loss and port to port isolation performance
- 6kV ring wave surge protection on all ports, 6kV surge withstand, guaranteed second order harmonics performance after 5 surges to each port of 6kV (per IEEE. C62.41.1991 Category A3)
- Ultra linear ferrites prevent inter-modulation where high level return carriers can affect forward path performance.
- 360° gold plated center conductor pin enhanced 360° contacts engineered for maximum conductor contact and superior retention.
- Gold-plated, copper construction for prevention of common path distortion, impedance.
- 6 kV High grade voltage blocking capacitors on all ports to eliminate core saturation
- Solid Zinc cast housing with bright Tin triple plating for durability in all environments
- Universal drive mounting and ground port screws packaged with each splitter
- Sealed ports to prevent moisture ingress to 15 PSI
- Meets or exceeds ANSI/SCTE 153 2008 for outdoor use.
- Superior intermodulation distortion and second harmonic performance.
- Excellent return loss and port-to-port isolation in the return band.
- Tin-plated copper back plate provides minimum -130dB shielding effectiveness and superior defense against long-term corrosion factors.
- Weather-sealed "F" ports
- Machine threaded flat "F" ports.



DiGiTAL-1TM

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DiGiTAL-1TM Splitter

General Specifications	
Nominal Impedance	75Ohms
Flatness (Tap & Out)	± 0.5dB
RFI	-130dB
Spurious Signals including 2nd Harmonics	-60dBmV measured with a +55 dBmV return input carrier (-45dBmV, after 5 surges of 6kV on each port measured with a +55dBmV return input carrier)
Blocking Capacitors	All ports
Surge Withstand	IEEE C62.41-1991 Category A3 (6000 V, 200 Amp, 05 μs-100KHz Ring Wave
Operating Temperature	-40 to +60° C (-40 to +140° F)

CATV DiGiTAL-1TM Horizontal Splitters

SPECIFICATIONS									
PARAMETER	FREQUENCY RANGE MHz	DiGi-2W-1G		DiGi-3W-1G		DiGi-3WB-1G		DiGi-24-1G	
		TYP	QC	TYP	QC	TYP	QC	TYP	QC
Insertion Loss	5-15	3.1	3.4	3.2/6.5	3.5/7.0	5.3	5.4	6.6	6.9
Maximum (dB)	15-42	3.3	3.4	3.2/6.5	3.5/7.0	5.3	5.5	6.6	7.0
	50-550	3.3	3.5	3.3/6.8	3.4/7.2	5.5	5.8	6.8	6.9
	550-870	3.6	3.8	3.7/7.5	3.9/7.6	6.0	6.2	7.3	7.6
	870-1000	3.7	4.0	3.7/7.5	3.9/7.8	6.3	6.7	7.5	7.9
Return Loss Input	5-15	28	23	28	25	30	24	24	21
Minimum (dB)	15-42	30	27	27	25	32	26	32	24
	50-550	29	27	25	21	25	20	25	20
	550-870	26	24	25	21	24	20	25	22
	870-1000	26	21	26	21	23	20	24	20
Return Loss	5-15	33	29	24	22	26	23	26	21
Output	15-42	45	41	42	34	35	30	38	32
Minimum (dB)	50-550	28	24	28	24	26	24	22	20
	550-870	25	21	26	23	25	22	25	22
	870-1000	26	21	30	22	25	22	25	21
Port/Port Isolation	5-15	32	29	34	30	32	28	33	25
(Output/Output)	15-42	40	37	44	38	38	33	44	36
Minimum (dB)	50-550	29	27	32	30	37	34	30	26
	550-870	27	23	34	29	34	25	28	25
	870-1000	28	22	34	27	31	23	28	24
RFI (dB)	5-1000	-130	-120	-130	-120	-130	-120	-130	-120
Impedance	5-1000	75 Ohm							
Spurious Signals Including 2nd Harmonic		-45 dBmV after 6 kV Ring Wave surge measured with a 55 dBmV return input carrier							
Surge Protection		6 kV Ring Wave per IEEE C62.41-1991 Category A3							
Waterproof test (Min)		15 PSI							
Operating Temperature		-40°C to +60°C							
Corrosion Resistance		1000 hours of salt spray per ANSI/SCTE 143 2007							

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CATV DiGiTAL-1™ Vertical Splitters

SPECIFICATIONS													
PARAMETER	FREQUENCY RANGE MHz	DiGi-2WV-1G		DiGi-3WV-1G		DiGi-3WBV-1G		DiGi-4WV-1G		DiGi-6W-1G		DiGi-8W-1G	
		TYP	QC	TYP	QC	TYP	QC	TYP	QC	TYP	QC	TYP	QC
Insertion Loss	5-15	3.3	3.5	3.3/6.8	3.5/7.0	5.5	6.0	6.8	7.0	9.0	9.2	10.8	11.0
Maximum (dB)	15-42	3.3	3.5	3.4/6.8	3.5/7.0	5.5	5.8	6.8	7.2	9.0	9.2	10.8	11.0
Return Loss	50-550	3.5	3.8	3.6/7.2	3.4/7.2	5.8	6.0	7.2	7.6	9.4	9.6	11.0	11.2
	550-870	3.6	3.8	3.8/7.5	4.0/7.6	5.9	6.2	7.3	7.6	9.7	9.9	11.4	11.8
	870-1000	3.8	4.2	4.0/8.0	4.3/8.3	6.5	6.9	7.8	8.2	10.0	10.5	12.0	12.5
Input	5-15	22	20	22	20	22	20	22	20	22	20	20	22
Return Loss	15-42	25	22	25	22	25	22	25	22	25	22	22	25
	50-550	22	20	22	20	22	20	22	20	22	20	22	20
	550-870	22	20	22	20	22	20	22	20	22	20	22	20
Return Loss	870-1000	22	20	22	20	22	20	22	20	22	20	22	20
	5-15	22	20	22	20	22	20	22	20	22	20	22	20
	Output	15-42	38	30	38	30	35	25	38	30	35	25	30
Return Loss	50-550	25	20	25	20	22	20	25	20	25	20	20	20
	550-870	22	20	22	20	22	20	22	20	22	20	22	20
	870-1000	22	20	22	20	22	20	22	20	22	20	22	20
Isolation	5-15	25	22	30	22	25	22	25	22	25	22	25	22
(Output/Output)	15-42	40	35	40	35	38	32	40	35	40	35	35	32
Return Loss	50-550	28	25	28	25	28	25	28	25	28	25	28	25
	550-870	27	24	27	24	27	24	27	24	27	24	27	24
	870-1000	25	23	25	23	25	23	25	23	25	23	25	23
RFI (dB)	5-1000	-130	-120	-130	-120	-130	-120	-130	-120	-130	-120	-130	-120
Impedance	5-1000	75 Ohm											
Spurious Signals Including 2nd Harmonic	-45 dBmV after 6 kV Ring Wave surge. Measured with a 55 dBmV return input carrier												
Surge Protection	6 kV Ring Wave per IEEE C62.41-1991 Category A3												
Waterproof test (Min)	15 PSI												
Operating Temperature	-40°C to +60°C												
Corrosion Resistance	1000 hours of salt spray per ANSI/SCTE 143 2007												



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DiGiTAL-1™

DiGiTAL-1TM

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CATV DiGiTAL-1TM Directional Couplers

SPECIFICATIONS									
PARAMETER	FREQUENCY RANGE (MHz)	DiGi-1W-6dB		DiGi-1W-9dB		DiGi-1W-12dB		DiGi-1W-16dB	
		TYP	QC	TYP	QC	TYP	QC	TYP	QC
Insertion Loss	5-15	2.3	2.6	1.2	1.6	0.8	1.0	0.8	1.0
Maximum (dB)	15-42	2.2	2.5	1.2	1.6	0.6	0.8	0.6	0.8
	50-550	2.5	2.6	1.4	1.7	0.8	1.0	0.6	0.8
	550-870	2.6	2.8	1.8	2.0	1.0	1.1	0.8	1.0
	870-1000	2.6	3.2	1.8	2.2	1.2	1.5	1.0	1.3
	Return Loss In/Out	5-15	25	20	20	20	24	20	20
Minimum (dB)	15-42	28	25	25	22	25	20	25	20
	50-550	24	20	22	20	24	20	22	20
	550-870	22	20	22	20	22	20	20	18
	870-1000	21	20	21	20	22	20	20	18
	Return Loss Tap	5-15	22	20	20	18	22	18	22
Minimum (dB)	15-42	28	27	28	27	30	28	30	28
	50-550	22	20	22	20	22	20	22	20
	550-870	20	18	21	18	21	18	20	18
	870-1000	20	18	20	18	20	18	20	18
	Isolation	5-15	30	24	30	25	30	25	35
Minimum (dB)	15-42	35	32	35	31	38	30	35	30
	50-550	28	24	30	27	35	28	35	30
	550-870	25	22	28	23	28	25	30	26
	870-1000	25	20	25	20	26	24	28	24
	RFI (dB)	5-1000	-130	-120	-130	-120	-130	-120	-130
Impedance	5-1000	75 Ohm							
Spurious Signals Including 2nd Harmonic	-45 dBmV after 6 kV Ring Wave surge measured with a 55 dBmV return input carrier								
Surge Protection	6 kV Ring Wave per IEEE C62.41-1991 Category A3								
Waterproof test (Min)	15 PSI								
Operating Temperature	-40°C to +60°C								
Corrosion Resistance	1000 hours of salt spray per ANSI/SCTE 143 2007								