MARATHON

Enduring Quality, Exceptional Value

1GHz Hi-Q Digital Couplers
Single Port Directional

Marathon 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 Marathon engineering team has a proven 30 year track record in the Broadband Cable industry and offers the best class in mechanical and consistent RF performance with high quality components and strict QC metrics.

They are available in a full line of housing configurations for headend, commercial or subscriber applications. *Your subscribers demand the best ... Install Marathon Drop Passives.*

Features & Benefits

- Consistent, high RF performance from 5 – 1002 MHz through extreme temperatures
- Enhanced 15 – 42 MHz return path for superior output return loss and port to port isolation performance
- 6 kV ring wave surge protection on all ports
- Ultra linear ferrites prevent inter-modulation where high level return carriers can affect forward path performance
- E180 series Enhanced 180˚contacts engineered for maximum conductor contact and superior retention; design allows insertion without marring the center conductor
- High grade voltage blocking capacitors on all ports to eliminate core saturation and prevent hum modulation
- Solid Zinc cast housing with Bright Tin triple plating for durability in harsh environments
- Universal drive Mounting and Ground Port screws packaged with each coupler. The T-Type version includes a ground facility.
- Sealed ports to prevent moisture ingress to 15 PSI
- Meets or exceeds ANSI/SCTE 153 2008 for outdoor use
- MoCA compliant

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Single Port Directional Specifications

Parameter	Frequency (MHz)	MARDC-1104*		MARDC-1106*		MARDC-1109*		MARDC-1112*		MARDC-1116*		MARDC-1120*		MARDC-1124*		MARDC-1127*		MARDC-1130*	
		Typ	QA	Typ	QA	Typ	QA	Typ	QA	Typ	QA	Typ	QA	Typ	QA	Typ	QA	Typ	QA
Tap Loss Maximum (dB)	5 - 15	1.0	0.8	1.5	1.8	0.5	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0
	15 - 42	1.0	0.8	0.8	1.0	0.5	1.0	0.5	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0
	50 - 550	1.2	1.0	0.8	1.0	0.5	1.0	0.5	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0
	550 - 870	1.2	1.0	0.8	1.0	0.5	1.0	0.5	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0
	870 - 1002	1.5	1.2	1.2	1.5	0.8	1.0	0.8	1.0	1.2	1.5	1.2	1.5	1.2	1.5	1.2	1.5	1.2	1.5
Insertion Loss Maximum (dB)	5 - 15	3.5	3.6	2.3	2.6	1.2	1.6	0.8	1.0	0.8	1.0	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.6
	15 - 42	3.5	3.6	2.2	2.5	1.2	1.6	0.6	0.8	0.6	0.8	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.6
	50 - 550	3.6	3.7	2.5	2.6	1.4	1.7	0.8	1.0	0.6	0.8	0.6	0.8	0.5	0.6	0.5	0.6	0.5	0.6
	550 - 870	3.8	3.7	2.6	2.8	1.8	2.0	1.0	1.1	0.8	1.0	0.8	1.0	0.6	0.8	0.6	0.8	0.6	0.8
	870 - 1002	3.9	4.2	2.6	3.2	1.8	2.2	1.2	1.5	1.0	1.3	1.0	1.3	1.0	1.3	1.0	1.3	1.0	1.3
Return Loss In/out Minimum (dB)	5 - 15	22	20	25	20	20	20	24	20	20	18	22	18	20	18	24	18	20	18
	15 - 42	25	24	28	25	25	22	25	20	25	20	25	20	25	20	25	20	25	20
	50 - 550	24	21	24	20	22	20	24	20	22	20	22	20	22	20	24	20	22	20
	550 - 870	22	20	22	20	22	20	22	20	20	18	20	18	20	18	22	18	20	18
	870 - 1002	21	20	21	20	21	20	22	20	20	18	20	18	20	18	22	18	20	18
Return Loss Tap Minimum (dB)	5 - 15	22	20	22	20	20	18	22	18	22	20	22	20	22	20	22	20	22	20
	15 - 42	33	30	28	27	28	27	30	28	30	28	30	28	30	28	30	28	30	28
	50 - 550	23	21	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20
	550 - 870	22	20	20	18	21	18	21	18	20	18	20	18	22	20	20	18	20	18
	870 - 1002	20	18	20	18	20	18	20	18	20	18	20	18	20	18	20	18	20	18
Isolation Minimum (dB)	5 - 15	30	22	30	24	30	25	30	25	35	30	35	33	40	35	40	35	40	35
	15 - 42	35	30	35	32	35	31	38	30	35	30	38	33	40	35	40	35	40	35
	50 - 550	32	28	28	24	30	27	35	28	35	30	35	30	38	35	38	35	42	38
	550 - 870	28	25	25	22	28	23	28	25	30	26	32	28	34	32	35	32	38	34
	870 - 1002	25	22	25	20	25	20	26	24	28	24	30	26	32	30	32	30	35	32
RFI (dB)	5 - 1002	-130	-120	-130	-120	-130	-120	-130	-120	-130	-120	-130	-120	-130	-120	-130	-120	-130	-120
Impedance	5 - 1002	75 Ohm																	
Spurious Signals Including 2nd Harmonics		-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																	

*** Use "T" for mini T-type and "L" for wallplate/right angle type.**

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