

# LOW-FREQUENCY CABLE SPECIFICATIONS

## STANDARD OFF-THE-SHELF ASSEMBLIES

SERIES		MH081	MH113	RF178	RF174	IJ5C* (IsoRate®)	RF316, IJ5C, IJ5H, GRF1-C, GRF1H-C	RS316	RF058
TYPE		50 Ω CABLES							
		0.81 mm (34 AWG)	1.13 mm (31 AWG)	RG 178 (28 AWG)	RG 174 (24 AWG)	Samtec 26 AWG, high-temp micro coax	RG 316 (24 AWG)	RG 316, double shielded (24 AWG)	RG 58 (20 AWG)
ELECTRICAL									
Impedance	Ω	50 ± 3	50 ± 2		50 ± 5	50 ± 2		50 ± 3	
Insertion Loss (dB/m)	100 MHz	1.00	0.60	0.50	0.40	0.68	0.30	1.40 @ 2 GHz	0.20
	1 GHz	3.10	1.90	1.70	1.40	2.37	1.25	1.60 @ 3 GHz	0.80
	6 GHz	8.60	4.90	5.90	4.40	6.53	4.25	2.20 @ 5 GHz	5.40
Propagation Delay	nS/m	4.70	4.70	4.83	5.06	4.17	4.83	-----	5.05
Current Rating	Amps	1.20	2.10	3.00	5.00	3.00	5.00	-----	
Capacitance	pF/m	100.00	95.00	96.00	101.00	85.60	96.00	95.80	102.00
CONSTRUCTION									
Center Conductor	Material	Silver Plated Copper		Silver Plated Copper Clad Steel	Bare Copper	Silver Plated Copper	Silver and Copper Plated Steel	Silver Plated Copper Clad Steel	Tinned Copper
	AWG	34	31	28	24	26	24		20
Dielectric	Material	FEP		PTFE	KLPE	Foamed FEP	PTFE	FEP	Solid Polyethylene
Shield	Material	Silver Plated Copper	Tinned Copper	Silver Plated Copper	Tinned Copper	Silver Plated Copper			Tinned Copper
Jacket	Material	PFA	FEP		PVC	FEP			PVC
MECHANICAL									
Operating Temp		-40 °C to +90 °C		-50 °C to +165 °C	-20 °C to +80 °C	-40 °C to +200 °C	-55 °C to +165 °C		-50 °C to +90 °C
Bend Radius	Min	5.00 mm	6.80 mm	10.20 mm	25.40 mm	3.18 mm	12.80 mm	12.80 mm	49.50 mm
Connector Options		MHF1, MHF3, MHF4	MHF1, SMA	MMCX, MCX, SMA, SMB, BNC, TNC, N Type	MMCX, MMCXV, MCX, SMA, SMB, BNC, TNC, N Type, Ganged	IsoRate®	MMCX, MMCXV, MCX, SMA, SMB, BNC, TNC, N Type, Ganged	MMCX, MCX, SMA, BNC, TNC	SMA, TNC, N Type

\* Also uses RG 316 (see next column)

SERIES		RF179, GRF7-C, GRF7H-C	RFB8T	RFC8T	RFB6T	RFC6T	RFA6T	C28S
TYPE	75 Ω CABLES							100 Ω CABLES
		RG 179 (28 AWG)	Belden 1855A (23 AWG)	12G-SDI, Belden 4855R (23 AWG)	Belden 1694A (18 AWG)	12G-SDI, Belden 4694R (18 AWG)	RG 6 (18 AWG)	Samtec 28 AWG, shielded twisted pair
<b>ELECTRICAL</b>								
Impedance	Ω	75 ± 3						100 ± 5
Insertion Loss (dB/m)	100 MHz	0.30	0.12		0.07	0.06	0.07	-----
	1 GHz	0.80	0.37	0.36	0.21	0.19	0.21	-----
	6 GHz	3.60	0.97	0.91	0.59	0.51	0.59	-----
Propagation Delay	nS/m	4.83	4.12	4.06		3.92	4.03	-----
Current Rating	Amps	3.00	5.00	4.70	-----	16.00	-----	-----
Capacitance	pF/m	64.00	55.70	53.40	53.14	52.20	53.14	38.00
<b>CONSTRUCTION</b>								
Center Conductor	Material	Silver Plated Copper	Bare Copper	Silver Plated Copper	Bare Copper	Silver Plated Copper	Bare Copper	Silver Plated Copper
	AWG	28	23		18			28
Dielectric	Material	PTFE	FHDPE	PE (Foam)	FHDPE	PE (Foam)	FHDPE	FEP
Shield	Material	Silver Plated Copper	1. Al Foil-Polyester Tape-Al Foil 2. Tinned Copper		1. Bonded Al Foil 2. Al Wire	1. Al Foil-Polyester Tape-Al Foil 2. Tinned Copper		Silver Plated Copper
Jacket	Material	FEP	PVC					
<b>MECHANICAL</b>								
Operating Temp		-50 °C to +165 °C	-30 °C to +75 °C		-20 °C to +75 °C	-30 °C to +75 °C	-20 °C to +105 °C	
Bend Radius	Min	10.20 mm	38.10 mm	41.00 mm	69.85 mm	70.00 mm	69.85 mm	19.05 mm
Connector Options		MCX, MMCX7, SMB, BNC, DIN 1.0/2.3, Ganged	HD-BNC, DIN 1.0/2.3		BNC, HD-BNC, DIN 1.0/2.3			CJT