

LLSB® Low Loss Military/Shipboard Coax

MIL-C-17 Qualified

- Low Loss Air Frame, Shipboard, Ground (Tactical) Interconnect
- Fire Retardant / Low Smoke (non-halogen)
- Flexible For Easy Deployment / Routing



Features & Benefits

- Lower Loss
- Superior Shielding

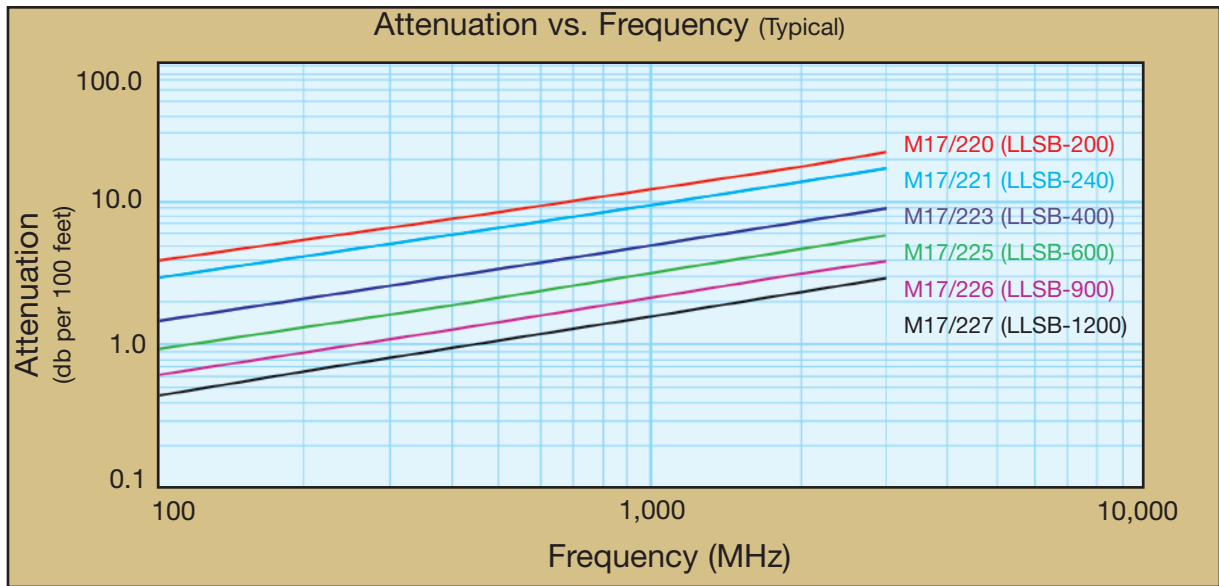
Effectiveness

- Fire Retardant (non-halogen)
- Light Weight
- Flexible for Ease of Deployment
- Excellent Connector Selection

- **Flexible:** With very tight minimum bend radius, LLSB cable can be easily routed into and through tight spaces without kinking. The bonded-tape outer conductor provides superior flexibility and ease of bending compared to previous generation M17/RG type, corrugated copper, or smooth wall copper hard-line cables.
- **Low Loss:** LLSB has lower loss than other cables of the same size. This is achieved through the use of a high velocity dielectric and bonded aluminum tape outer conductor. The proprietary gas-injected closed cell foam dielectric prevents water migration through the cable and provides excellent crush resistance.
- **Fire Retardant:** A black UV resistant non-halogen, low smoke - fire retardant, cross-linked polyethylene jacket makes the cable rugged and resistant to the full range of military/defense environments. LLSB easily achieves FAR 25, NES-711, NES-713 compliance.
- **RF Shielding:** The bonded aluminum tape outer conductor is overlapped to provide 100% coverage, resulting in >90 dB RF shielding (>180 dB crosstalk) and excellent interference immunity (ingress and egress).
- **Phase Stability:** The intimately bonded structure and foam dielectric of LLSB cables provide excellent phase stability over temperature and with bending. The high velocity dielectric results in superior phase stability as compared with solid and air-spaced dielectric cables.
- **Connectors and Assemblies:** A full range of connector interfaces is available in crimp or clamp styles in addition to supporting installation tools. Custom preterminated and tested assemblies with phase matching, insertion loss matching, and other special electrical or marking requirements can also be provided.
- **Reference:** See page 9 for complete listing of qualified M17/220-/229 constructions.

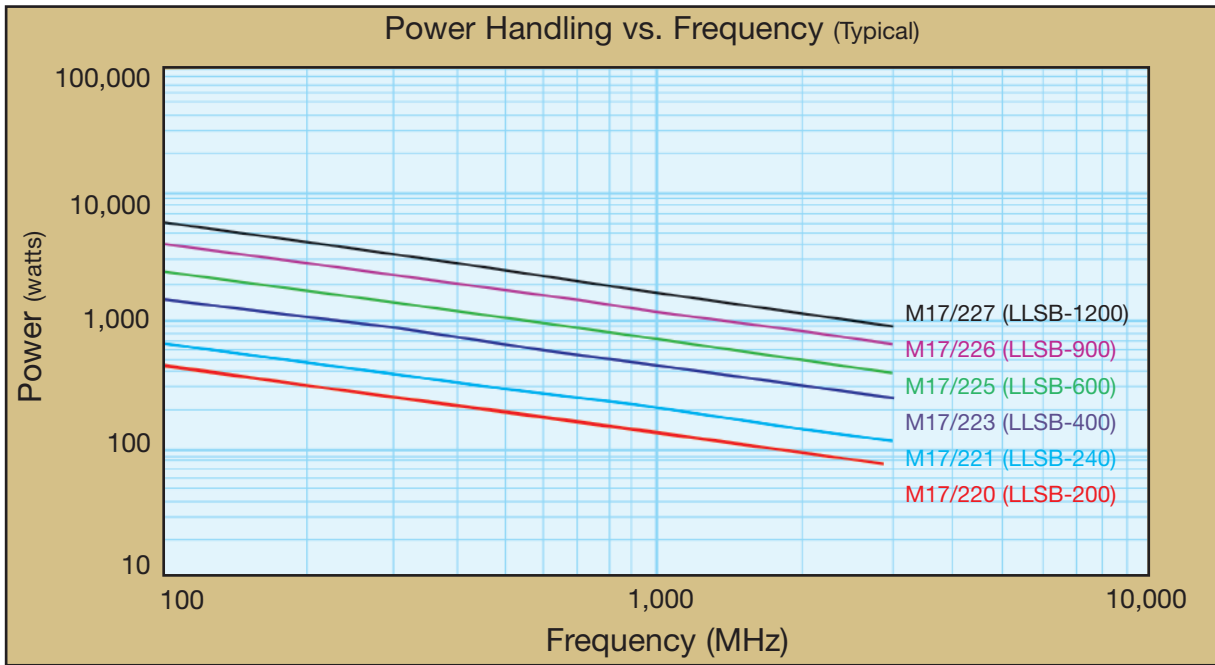
TMS M17 No.	M17 QPL No.	TMS Dwg No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Min. Bend Radius inches (mm)	Weight lbs/ft (kg/m)	Imped. (ohms) Vp (%)	Capacitance pF/ft (pF/m)	Max. Op Voltage vms	Temp. Range F (C)	M17 Test Frequency (max)
LLSB-200 M17/220-00001	17-041-99	AA-8469	BC	Foam PE	Alum Tape; 36TC	XLPE	1.0	0.037	50 +/- 2	24.5	1,000	-22 +185	0.05- 2.5 GHz Swept
			0.044 (1.12)	0.116 (2.95)	0.144 (3.66)	0.195 (4.95)	(25.4)	(0.055)	83 (80.4)	(-30 +85)			
LLSB-240 M17/221-00001	17-041-99	AA-8470	BC	Foam PE	Alum Tape; 36TC	XLPE	1.25	0.051	50 +/- 2	24.2	1,500	-22 +185	0.05- 2.5 GHz Swept
			0.056 (1.42)	0.150 (3.81)	0.178 (4.52)	0.242 (6.15)	(31.8)	(0.076)	84 (79.4)	(-30 +85)			
LLSB-400 M17/223-00001	17-041-99	AA-8471	BCCAI	Foam PE	Alum Tape; 34TC	XLPE	2.0	0.114	50 +/- 2	23.9	3,000	-22 +185	0.05- 2.5 GHz Swept
			0.108 (2.74)	0.285 (7.24)	0.320 (8.13)	0.405 (10.29)	(50.8)	(0.170)	85 (78.4)	(-30 +85)			
LLSB-600 M17/225-00001	17-041-99	AA-8473	BCCAI	Foam PE	Alum Tape; 33TC	XLPE	3.0	0.168	50 +/- 2	23.4	5,000	-22 +185	0.05 2.5 GHz Swept
			0.176 (4.47)	0.455 (11.56)	0.490 (12.45)	0.590 (14.99)	(76.2)	(0.250)	87 (76.8)	(-30 +85)			
LLSB-900 M17/226-00001	17-041-99	AA-8474	BC Tube	Foam PE	Alum Tape; 30TC	XLPE	4.5	0.375	50 +/- 2	23.4	7,000	-22 +185	0.05- 2.5 GHz Swept
			0.262 (6.65)	0.680 (17.27)	0.732 (18.59)	0.870 (22.10)	(114.3)	(0.559)	87 (76.8)	(-30 +85)			
LLSB-1200 M17/227-00001	17-041-99	AA-8475	BC Tube	Foam PE	Alum Tape; 30TC	XLPE	6.0	0.686	50 +/- 2	23.1	8,000	-22 +185	0.05 2.5 GHz Swept
			0.349 (8.86)	0.920 (23.37)	0.972 (24.69)	1.200 (30.48)	(152.4)	(1.022)	88 (75.8)	(-30 +85)			

See page 9 for materials abbreviations.



Frequency (MHz)	10	30	50	100	400	1,000	1,500	2,000	2,500	3,000	k1	k2
M17/220 (LLSB-200)	1.2	2.1	2.7	3.8	7.7	12	15	18	20	22	0.37753	0.000380
M17/221 (LLSB-240)	0.9	1.6	2.0	2.9	5.8	9	12	13	15	17	0.28480	0.000380
M17/223 (LLSB-400)	0.5	0.8	1.0	1.5	3.0	4.9	6.0	7.0	8.0	9	0.14387	0.000306
M17/225 (LLSB-600)	0.3	0.5	0.6	0.9	1.9	3.1	3.9	4.6	5.2	5.8	0.08888	0.000306
M17/226 (LLSB-900)	0.2	0.3	0.4	0.6	1.3	2.1	2.6	3.1	3.5	3.9	0.06091	0.000188
M17/227 (LLSB-1200)	0.1	0.2	0.3	0.5	1.0	1.6	2.0	2.3	2.7	3.0	0.04396	0.000188

Attenuation at Any Frequency = [k1 x \sqrt{Fmhz}] + [k2 x Fmhz]; dB per 100 feet



Power Handling vs. Frequency (Typical)

Frequency (MHz)	10	30	50	100	400	1,000	1,500	2,000	2,500	3,000
M17/227 (LLSB-1200)	18953	10835	8337	5823	2795	1689	1342	1137	998	895
M17/226 (LLSB-900)	13044	7477	5763	4038	1959	1197	958	815	718	647
M17/225 (LLSB-600)	8172	4680	3605	2523	1219	742	592	503	443	398
M17/223 (LLSB-400)	4927	2830	2184	1534	750	462	371	318	281	254
M17/221 (LLSB-240)	2205	1268	979	689	339	210	169	145	129	117
M17/220 (LLSB-200)	1459	840	649	457	225	140	113	97	86	78

Watts; Sea Level; Ambient +40C; VSWR 1:1