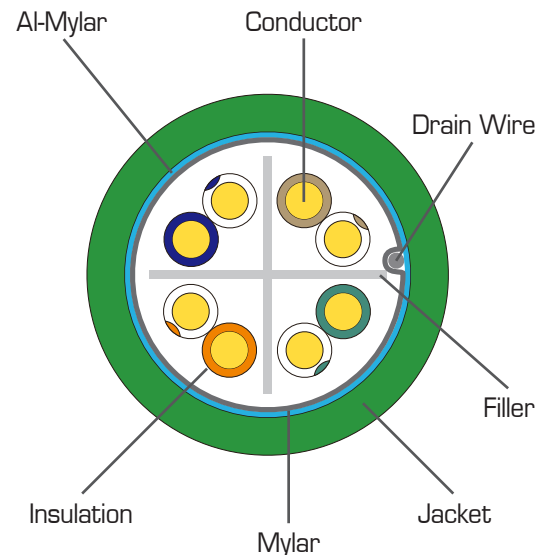


BCLS-23GR-5

CAT6 F/UTP LSZH Cable



Kramer's BCLS-23GR is a high performance CAT6 F/UTP cable designed for IT, LAN and Ethernet installations. Constructed with 23AWG solid bare copper conductors with a cross filler and overall metal foil screen with a drain wire in a LSZH jacket with sequential markings every meter and packed on a fumigated plywood reel make this cable exceed CAT6 specifications to provide additional performance and bandwidth over the basic standard



Product Description	CAT6 F/UTP, 23AWG solid bare copper, LSZH. With cross filler. Overall metal foil screen with drain wire.
Product Features	High performance of transmission. High quality of safety properties. Sweep frequency up to 400 MHz.
Applications	Structure cabling for horizontal and building backbone cable. Designed for IT, LAN and Ethernet installations. IEEE 802.3ab 1000BASE-T, 1000BASE-TX and legacy speeds. CDDI / ATM / Token Ring IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)
Applicable Standard	<p>Performance Standards:</p> <p>ANSI/TIA-568-C.2 (2009) Balanced Twisted-Pair Telecommunications Cabling and Components Standards</p> <p>ISO/IEC 11801 (Edition 2.2) Information technology - Generic cabling for customer premises</p> <p>IEC 61156-5 (Edition 2.0) Multicore and symmetrical pair/quad cables for digital communications - Part 5: Symmetrical pair/quad cables with transmission characteristics up to 1000 MHz - Horizontal floor wiring - Sectional specification</p> <p>EN 50173-1:2011 Information technology. Generic cabling systems. General requirements</p> <p>EN 50288-5-1:2013 Multi-element metallic cables used in analogue and digital communication and control - Part 5-1: Sectional specification for screened cables characterized up to 250 MHz - Horizontal and building backbone cables</p> <p>Standards for flammability, acidity and smoke:</p> <p>IEC 60332-1-2 Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame</p> <p>IEC 61034-1 / 61034-2 Measurement of smoke density of cables burning under defined conditions</p> <p>IEC 60754-2 Test on gases evolved during combustion of materials from cables</p> <p>EU Directive 2011/65/EC (RoHS 2)</p> <p>EU Directive 2006/95/EC (LVD)</p> <p>CE compliance date: 2010.01.01</p>



MATERIAL AND CONSTRUCTION

Conductor	Material	23AWG solid bare copper	
Insulation	Material	Polyolefin (PO)	
	Color code & diameter	Blue & white/blue Stripe	1.08 ± 0.02 mm
		Orange & white/orange stripe	1.05 ± 0.02 mm
		Green & white/green stripe	1.08 ± 0.02 mm
		Brown & white/brown stripe	1.05 ± 0.02 mm
Twisted	Description	Left hand direction	
Filler	Material	Polyolefin (PO)	
Assembly	Description	Left hand direction	
Rip Shield	Material	Mylar tape	
Drain wire	Material	24AWG solid tinned copper	
Shield	Material	Al mylar tape	
	Description	100% coverage and mylar side facing out	
Jacket	Material	Low smoke zero halogen (LSZH)	
	Diameter	7.20 ± 0.2 mm	
	Thickness	0.45 ± 0.05 mm	
	Color	Green [Pantone 7732C]	

USAGE & ENVIRONMENTAL CONDITION

Temperature range	Storage & shipping	-20°C to 60°C
	Installation	0°C to 60°C
	Operation	-20°C to 60°C
Minimum bending radius	≥ 4 times of overall diameter	
Maximum pulling tension	≤ 110 N	

PHYSICAL & ELECTRICAL CHARACTERISTICS (AT 20°C)

Temperature & voltage rating	60°C / 300V
Spark test	2.5 KV DC
AC leakage current through overall jacket	≤ 10mA (1.5KV AC)
Cable cold bend	-20°C for 4 hr
Conductor DC resistance	≤ 9.38 Ω/100m
Resistance unbalance	≤ 5%
Dielectric strength	1.5 KV ac for 2 s
Insulation resistance	≥ 5000 MΩ•m
Mutual capacitance	≤ 5.6 nF/100m
Capacitance unbalance pair-to-ground	≤ 330 pF/100m
Characteristic Impedance	@1~100MHz, 100±15 Ohm
Coupling Attenuation	AT 30 MHz ≤ 55dB; AT 250 MHz ≤ 47 dB
Insulation Tensile Strength	2400 PSI MIN. (1.69 Kg/m²)
NVP	69%

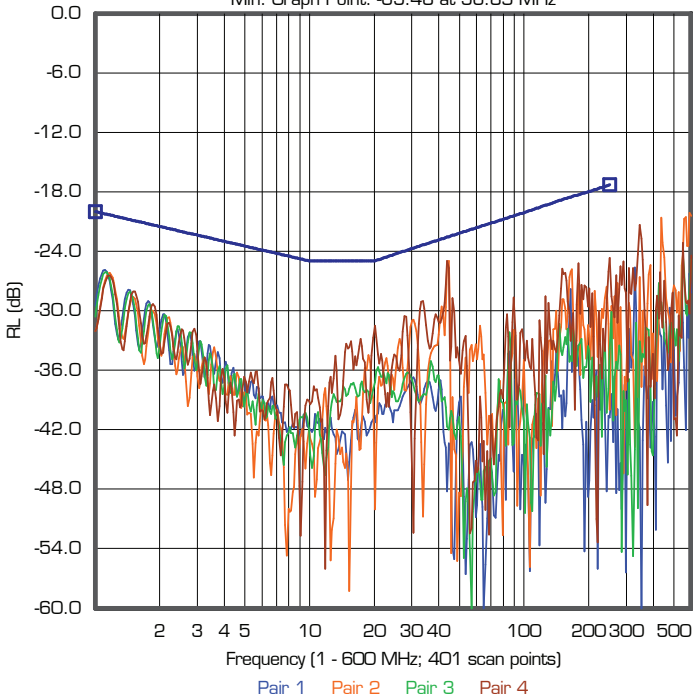
TRANSMISSION PERFORMANCE (AT 20°C)

Freq. MHz	IL	NEXT	PS NEXT	ACR	PS ACR	ACR-F	PS ACR-F	RL	Propagation Delay	Delay Skew
	Max. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Max. ns/100m	Max. ns/100m
1	2.03	77.30	75.30	75.28	73.28	70.80	67.80	20.00	570.00	45.00
4	3.78	68.27	66.27	64.49	62.49	58.76	55.76	23.01	552.00	
8	5.32	63.75	61.75	58.43	56.43	52.74	49.74	24.52	546.73	
10	5.95	62.30	60.30	56.35	54.35	50.80	47.80	25.00	545.38	
16	7.55	59.24	57.24	51.68	49.68	46.72	43.72	25.00	543.00	
20	8.47	57.78	55.78	49.31	47.31	44.78	41.78	25.00	542.05	
25	9.51	56.33	54.33	46.83	44.83	42.84	39.84	24.32	541.20	
31.25	10.67	54.88	52.88	44.20	42.20	40.90	37.90	23.64	540.44	
62.5	15.38	50.36	48.36	34.98	32.98	34.88	31.88	21.54	538.55	
100	19.80	47.30	45.30	27.50	25.50	30.80	27.80	20.11	537.60	
150	24.71	44.66	42.66	19.95	17.95	27.28	24.28	18.87	536.94	
200	28.98	42.78	40.78	13.80	11.80	24.78	21.78	18.00	536.55	
250	32.85	41.33	39.33	8.48	6.48	22.84	19.84	17.32	536.28	
300	36.43	40.14	38.14	3.72	1.72	21.26	18.26	16.77	536.08	
350	39.79	39.14	37.14	N.A.	N.A.	19.92	16.92	16.30	535.92	
400	42.97	38.27	36.27	N.A.	N.A.	18.76	15.76	15.89	535.80	

*Values above 250MHz are for information only

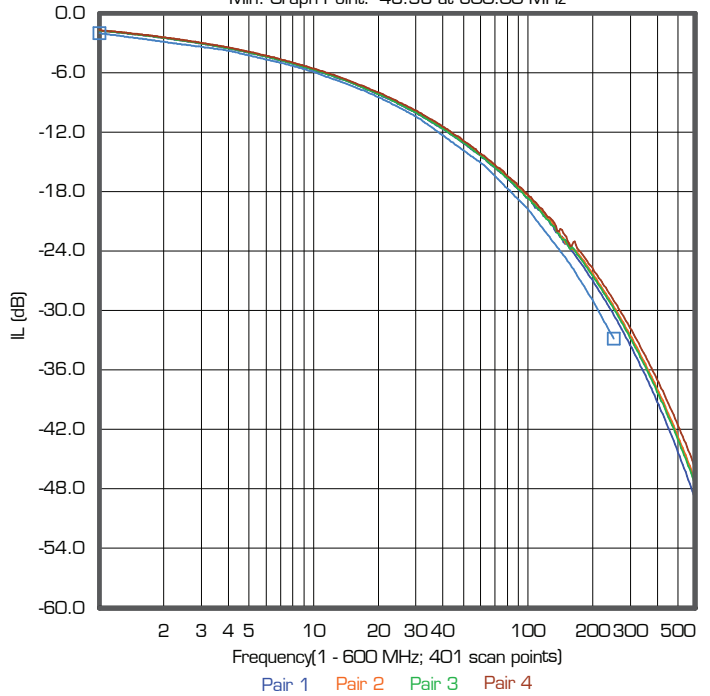
RL vs. Frequency

Max. Graph Point: -20.12 at 591.73 MHz
 Min. Graph Point: -65.48 at 56.89 MHz



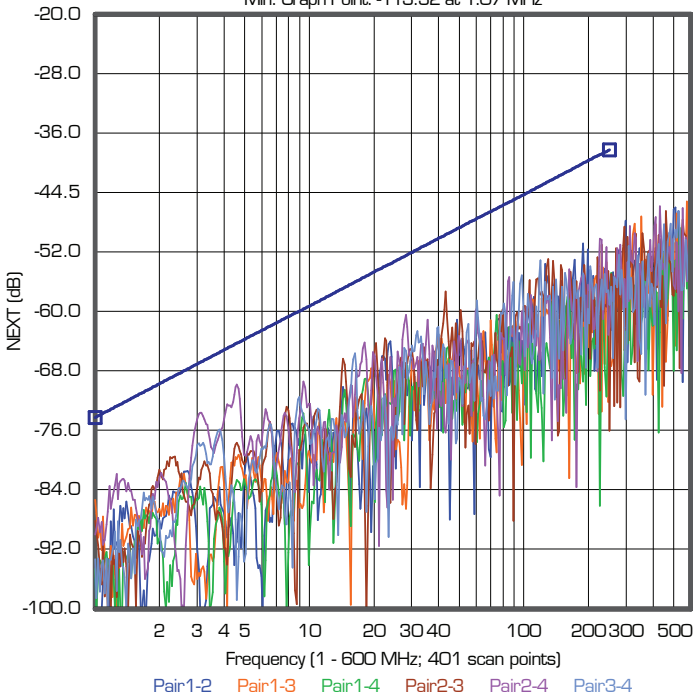
IL vs. Frequency

Max. Graph Point: -1.72 at 1.00 MHz
 Min. Graph Point: -48.98 at 600.00 MHz



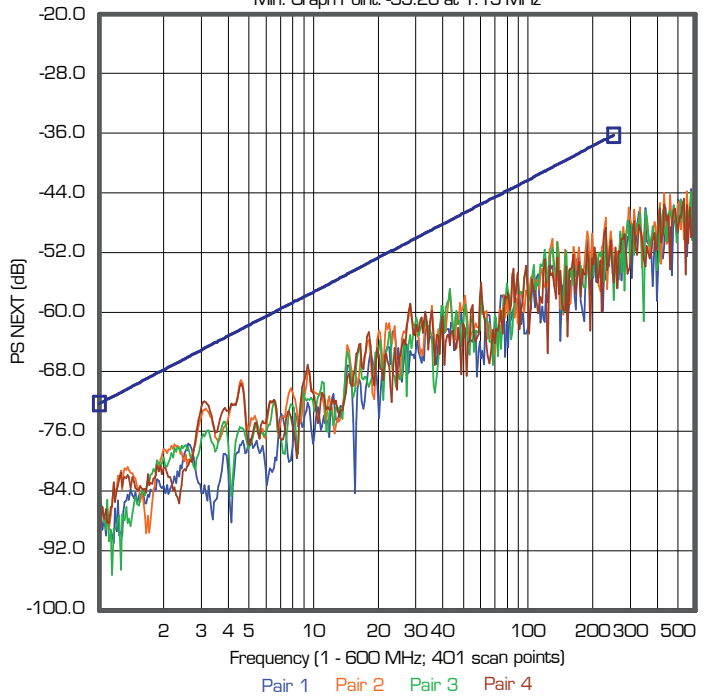
NEXT vs. frequency

Max. Graph Point: -45.04 at 591.73 MHz
 Min. Graph Point: -113.32 at 1.07 MHz



PS NEXT vs. Frequency

Max. Graph Point: -42.69 at 591.73 MHz
 Min. Graph Point: -95.26 at 1.15 MHz



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SHIPPING INFORMATION:

Item	Dimension	Nominal net weight	
Cable	500 m	25.26 kg (55.68 lb)	
Plywood reel	D450 x d220 x H330 x h300mm	3.9 kg	
Pallet	1150 x 1150 x 120 mm	14.1 kg	