

## Lower Loss Replacement for RG Series

Replace traditional 'RG' types for benefit of:

- **lower loss**
- **better shielding > - 90dB**

LL240 series cable sets are designed as superior alternative to RG58, RG223 types. Usable upto 6 GHz with a wide choice of connectors like SMA, N, BNC, TNC and in various styles like straight, right angle and panel mounts.



- **Superior replacement for RG58, RG223,** LL240 cable sets are drop-in replacement for RG series.
- **RF Shielding** is 90 dB. This is 30dB higher than 60dB (typical) for single shielded RG types.
- **Low Loss :** Loss is 30% less than comparable size RG cables.
- **Flexibility:** LL240 types are highly flexible and can be routed easily. They have the tightest bend radius available for any cable of similar size and performance.

### APPLICATIONS

- Satcom, IF, Military Jamming and Military Communications

#### Electrical Specifications

Impedance	50 Ω
Frequency Range	DC ~ 6 GHz
Velocity of Propagation	84 %
Capacitance	80 pF/m
Shielding Effectiveness	> 90 dB
Working Voltage	1 kV (DC)
Operating Temperature	-40°C to +85°C

#### Mechanical Specifications

Inner Conductor	Copper, 1.4mm dia.
Dielectric	PE, Foamed
Outer Conductor	Aluminium Tape
Braid	Cooper, Tinned
Jacket	Black PE, 6.1mm dia.
Bend Radius: installation	19.1 mm
Bend Radius: multiple	63.5 mm
Weight	0.052 kg/m

#### Attenuation & Power Handling Data

Frequency (GHz)	0.10	0.20	0.40	0.9	1.5	2	3	4	5	6
Attenuation (dB/m)	0.07	0.11	0.16	0.25	0.33	0.38	0.47	0.55	0.62	0.69
Average Power (W)	800	560	410	260	200	170	140	120	105	95

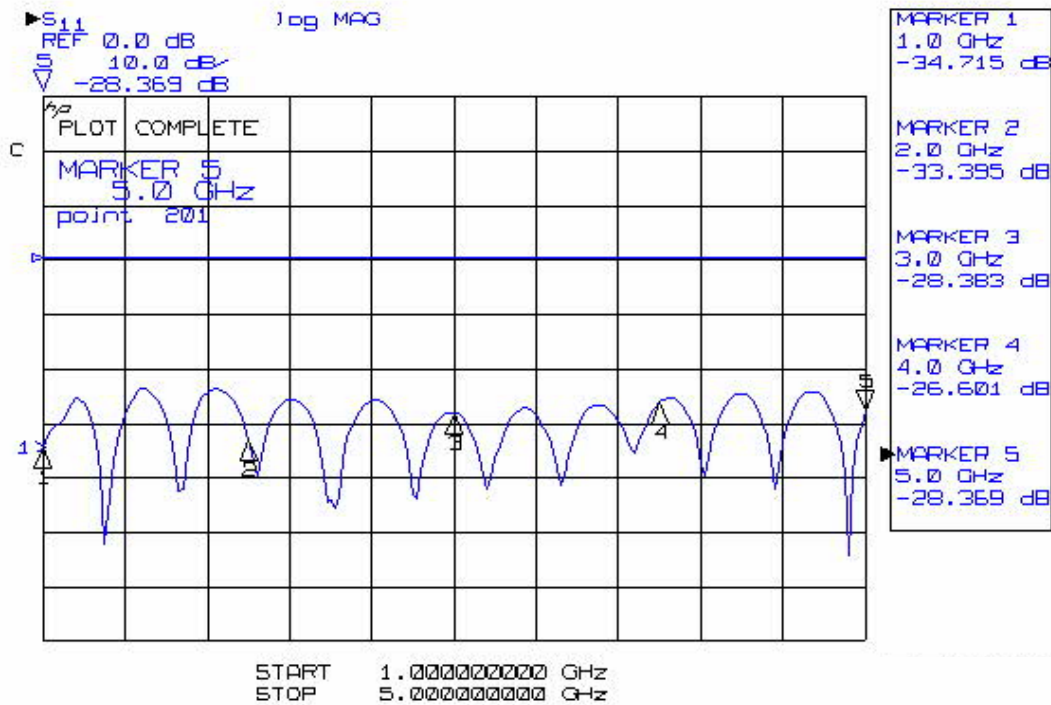
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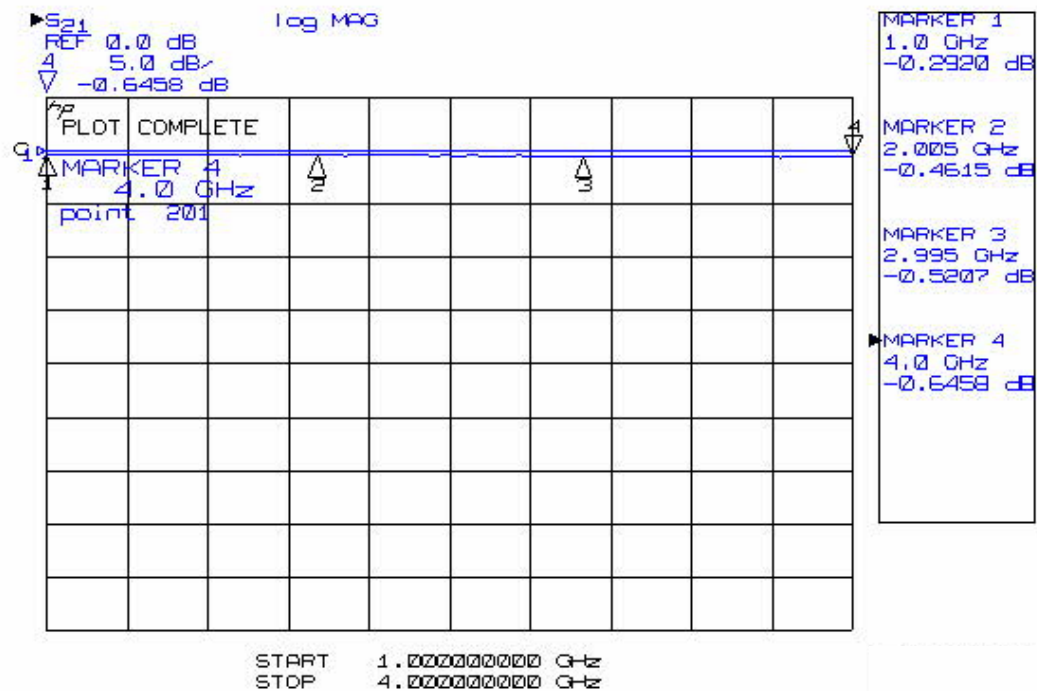
# Low Loss Pre-Connectorized Cable Sets, LL240 Series

## Lower Loss Replacement for RG Series

### Return Loss of 1m, LL240 Cable Set with N(M) on both sides



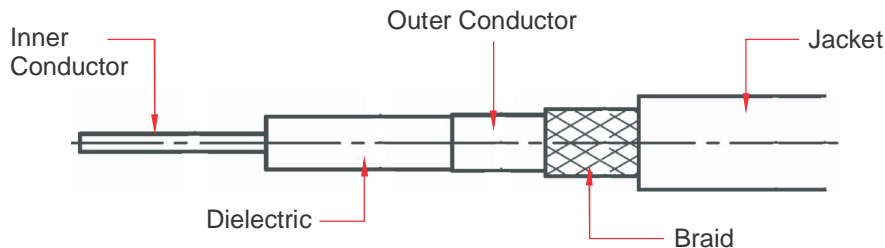
### Insertion Loss of 1m, LL240 Cable Set with N(M) on both sides



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### CABLE CONSTRUCTION



### Connectors Specifications

Specifications	SMA Connectors	N Connectors	TNC Connectors
Outer Conductor	Brass, Gold Plated	Brass, Nickel alloy plated	Brass, Nickel alloy plated
Center Conductor	Brass, Gold Plated	Brass, Gold Plated	Brass, Gold Plated
Insulation	PTFE	PTFE	PTFE
Gasket	Silicone Rubber	Silicone Rubber	Silicone Rubber
Nominal Impedance	50 Ω	50 Ω	50 Ω
Frequency range	DC~6 GHz	DC~6 GHz	DC~6 GHz
Mating/Unmating	500 operations	500 operations	500 operations

### Ordering Codes Description

LL240 - (Length) - (Connector 1) - (Connector 2)  
**L L** - **1 2 3** - **1 2 3 U**

<b>L L</b>	Length	0.5 = 0.5 ; 1 = 1.0 ; 2 = 2.0
<b>1</b>	Connector Series	SMA = SMA ; N = N ; BNC = BNC ; TNC = TNC
<b>2</b>	Male/Female Designator	M = Male ; F = Female
<b>3</b>	Orientation of Connector	ST = Straight ; RA = Right Angle
<b>U</b>	Unit of Length	M = Meter ; F = Feet ; I = Inch

1 meter cable set with SMA (Male) on both sides = LL240-1.0-SMA(M/ST)-SMA(M/ST)-M

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# Low Loss Pre-Connectorized Cable Sets, LL240 Series

## Lower Loss Replacement for RG Series

### Cable Set Ordering Codes

Ordering Code	Length	Insertion Loss (dB) Typical					
		400 GHz	1 GHz	1.5 GHz	3 GHz	4 GHz	6 GHz
<b>SMA (Male) Straight - SMA (Male) Straight (DC to 6 GHz)</b>							
LL240-0.5-SMA(M/ST)-SMA(M/ST)-M	0.5m	0.16	0.25	0.31	0.43	0.47	0.59
LL240-1.0-SMA(M/ST)-SMA(M/ST)-M	1m	0.27	0.41	0.51	0.69	0.80	1.02
LL240-2.0-SMA(M/ST)-SMA(M/ST)-M	2m	0.47	0.72	0.92	1.25	1.45	1.78
LL240-5.0-SMA(M/ST)-SMA(M/ST)-M	5m	1.05	1.66	2.13	2.92	3.38	4.18
LL240-1.0-SMA(M/ST)-SMA(M/ST)-F	1 feet	0.14	0.18	0.23	0.30	0.35	0.42
LL240-2.0-SMA(M/ST)-SMA(M/ST)-F	2 feet	0.19	0.28	0.35	0.47	0.54	0.65
<b>N (Male) Straight - N (Male) Straight (DC to 4 GHz)</b>							
LL240-0.5-N(M/ST)-N(M/ST)-M	0.5m	0.17	0.26	0.32	0.44	0.48	-
LL240-1.0-N(M/ST)-N(M/ST)-M	1m	0.28	0.42	0.52	0.70	0.81	-
LL240-2.0-N(M/ST)-N(M/ST)-M	2m	0.48	0.73	0.93	1.26	1.46	-
LL240-5.0-N(M/ST)-N(M/ST)-M	5m	1.06	1.67	2.14	2.93	3.39	-
LL240-1.0-N(M/ST)-N(M/ST)-F	1 feet	0.15	0.19	0.24	0.31	0.36	-
LL240-2.0-N(M/ST)-N(M/ST)-F	2 feet	0.20	0.29	0.36	0.48	0.55	-
<b>TNC (Male) Straight - TNC (Male) Straight (DC to 4 GHz)</b>							
LL240-0.5-TNC(M/ST)-TNC(M/ST)-M	0.5m	0.18	0.27	0.33	0.45	0.49	-
LL240-1.0-TNC(M/ST)-TNC(M/ST)-M	1m	0.29	0.43	0.53	0.71	0.82	-
LL240-2.0-TNC(M/ST)-TNC(M/ST)-M	2m	0.49	0.74	0.94	1.27	1.47	-
LL240-5.0-TNC(M/ST)-TNC(M/ST)-M	5m	1.07	1.68	2.15	2.94	3.40	-
LL240-1.0-TNC(M/ST)-TNC(M/ST)-F	1 feet	0.16	0.20	0.25	0.32	0.37	-
LL240-2.0-TNC(M/ST)-TNC(M/ST)-F	2 feet	0.21	0.30	0.37	0.49	0.56	-
<b>BNC (Male) Straight - BNC (Male) Straight (DC to 4 GHz)</b>							
LL240-0.5-BNC(M/ST)-BNC(M/ST)-M	0.5m	0.16	0.25	0.31	0.43	0.47	-
LL240-1.0-BNC(M/ST)-BNC(M/ST)-M	1m	0.27	0.41	0.51	0.69	0.80	-
LL240-2.0-BNC(M/ST)-BNC(M/ST)-M	2m	0.47	0.72	0.92	1.25	1.45	-
LL240-5.0-BNC(M/ST)-BNC(M/ST)-M	5m	1.05	1.66	2.13	2.92	3.38	-
LL240-1.0-BNC(M/ST)-BNC(M/ST)-F	1 feet	0.14	0.18	0.23	0.30	0.35	-
LL240-2.0-BNC(M/ST)-BNC(M/ST)-F	2 feet	0.19	0.28	0.35	0.47	0.54	-
<b>SMA (Male) Straight - SMA (Male) Right Angle (DC to 3 GHz)</b>							
LL240-0.5-SMA(M/ST)-SMA(M/RA)-M	0.5m	0.18	0.27	0.33	0.45	-	-
LL240-1.0-SMA(M/ST)-SMA(M/RA)-M	1m	0.29	0.43	0.53	0.71	-	-
LL240-2.0-SMA(M/ST)-SMA(M/RA)-M	2m	0.49	0.74	0.94	1.27	-	-
LL240-5.0-SMA(M/ST)-SMA(M/RA)-M	5m	1.07	1.68	2.15	2.94	-	-
LL240-1.0-SMA(M/ST)-SMA(M/RA)-F	1 feet	0.16	0.20	0.25	0.32	-	-
LL240-2.0-SMA(M/ST)-SMA(M/RA)-F	2 feet	0.21	0.30	0.37	0.49	-	-

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## Specifications for Flexible Low Loss Cable Assemblies

**Length                      Connector 1                      Connector 2**

- Should be flexible and bendable, easily routable and non-kink type
- Cable should conform to MIL-C-17, Connectors to MIL-PRF-39012

### Cable Electrical Specifications

- Frequency of Usage : DC~ 6 GHz
- Shielding Effectiveness : 90 dB or better
- Velocity of Propagation : > 78 %
- Impedance : 50 ohms
- Capacitance : 83.3 pF /m
- Power (Average) : > 210 Watt @ 1 GHz  
> 160 Watt @ 2 GHz  
> 130 Watt @ 3 GHz
- Loss : < 0.25 dB/meter @ 1 GHz  
< 0.40 dB/meter @ 2 GHz  
< 0.50 dB/meter @ 3 GHz
- VSWR : < 1.35 (DC~6 GHz) for straight connectors

### Cable Construction

- Centre conductor : Solid Copper
- Dielectric : Foamed Polyethelene
- Outer conductor : Aluminium Tape
- Overall braid : Tinned Cooper
- Jacket : Black PE
- Strain Relief : Reliable strain relief at the cable to connector joint should be provided. A double strain relief with progressive stress distribution is preferred

### Cable Mechanical and Environmental Specifications

- Outer Diameter : < 6.2 mm
- Bending Radius (static) : < 20 mm
- Bending Radius (repeated) : < 64 mm
- Working Temperature : -40°C to + 85 °C

### Connectors Specifications

- Attachment Method : Inner Solder, Outer Crimp
- Frequency Range : DC~6 GHz
- Material : Brass with Nickel alloy plating