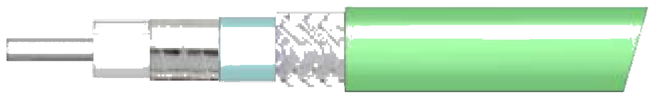
Temperature Conditioned N Male to N Male Low Loss Cable 48 I nch Length Using ET38352 Coax

RF Cable Assemblies Technical Data Sheet ET29543

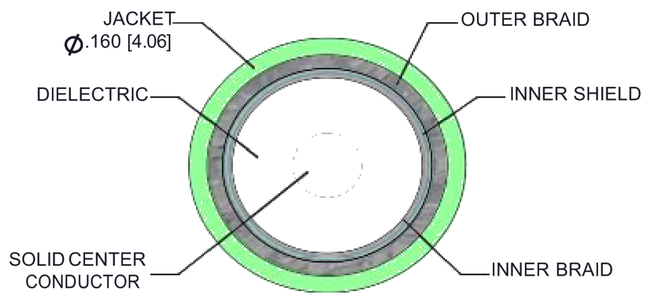
Configuration

- Connector 1: ET45446 (N Male)
- Connector 2: ET45446 (N Male)
- Cable: ET-P160LL



Features

- Max Frequency 18 GHz
- 82.5% Phase Velocity
- Triple Shielded
- FEP Jacket
- Thermally Pre-Conditioned Cable
- Captivated Stainless Steel Connectors
- Expanded PTFE dielectric
- J-STD-Soldering
- Lot Traceability
- Test Report
- Ship same day



SECTION VIEW

Applications

- General Purpose
- Laboratory Use
- High Reliability
- Extreme Temperatures
- Military Electronics
- Avionics
- IFF
- SATCOM
- ECM

Description

Ebeestock's temperature conditioned low loss cable assemblies are part of our full line of reliable RF components avail- able for shipment same day. These commercial-off-the-shelf (COTS), RF / microwave cable assemblies are designed and processed with high reliability in mind. Captivated stainless steel cable assembly connectors and thermally pre-conditioned triple-shielded coaxial cable are assembled using J-STD soldering processes and WHMA-A-620 workmanship criteria. The combination of stable materials, processing and acceptance testing work together to create a dependable cable assembly for applications where performance over time is important or the cost of failure is high. Each finished COTS temperature condi- tioned low loss cable assembly is traceable to its component lots and a test report is available for every lot produced.

Our highly reliable low loss conditioned RF cable assembly datasheet specifications and drawing with dimensions are shown below in this PDF. Ebeestock's broad catalog of RF, microwave and millimeter wave cable assemblies allow designers to configure and customize their signal connections however they like. Whether the need is to provide reliable stable connections or fielding dependable RF cables, Ebeestock has the right cable assemblies for the job. Ebeestock can also expertly build your custom cable assemblies for you and ship them same day.

Referenced Specifications

IPC/WHMA-A-620	Requirements and Acceptance for Cable and Wire Harness Assemblies
MIL-STD-348	Radio Frequency Connector Interfaces for MIL-DTL-3643, MIL-DTL-3650, MIL-DTL-3655, MIL-DTL-25516, MIL-PRF-31031, MIL-PRF-39012, MIL-PRF-49142, MIL-PRF...
IPC J-STD-001	Requirements for Soldered Electrical and Electronic Assemblies
IPC J-STD-006	Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: Temperature Conditioned N Male to N Male Low Loss Cable 48 Inch Length Using ET-P160LL Coax ET29543

8th Floor, Building 1, Yongfu Science and Technology Center Industrial Park,
Nanzha District 5, Humen,523900, Dongguan, Guangdong, China.

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RF Cable Assemblies Technical Data Sheet ET29543

SAE AS5942	Marking of Electrical Insulating Materials
SAE AS23053	Insulation Sleeving, Electrical, Heat Shrinkable, General Specifications For

Material Specifications

Component	Specification
Cable	ET-P160LL in accordance with ET-P160LL datasheet
Connector 1	ET45446 in accordance with MIL-STD-348
Connector 2	ET45446 in accordance with MIL-STD-348
Heat Shrink 1	SUMITUBE W3B2(4X) SIZE 12/3 in accordance with SAE AS23053 (AS APPLICABLE)
Heat Shrink 2	SUMITUBE W3B2(4X) SIZE 12/3 in accordance with SAE AS23053 (AS APPLICABLE)
Heat Shrink 3	M23053/4-303-0 in accordance with SAE AS23053
Heat Shrink 4	M23053/4-303-0 in accordance with SAE AS23053
Solder	SN63 in accordance with J-STD-006

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
VSWR			1.35:1	
Velocity of Propagation		82.5		%
Capacitance		25 [82.02]		pF/ft [pF/m]
Dielectric Withstanding Voltage (AC)			1,000	Vrms

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	1	2	4.5	9	18	GHz
Insertion Loss (Max.)	0.52	0.76	1.13	1.62	2.37	dB

Electrical Specification Notes:
The Insertion Loss data above is based on the performance specifications of the coax cable used in this assembly. The Insertion Loss includes an estimated insertion loss of 0.04*SQRT(FGHz) dB per connector.

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Mechanical Specifications

Cable Assembly

Description	Minimum	Typical	Maximum	Units
Length*	48 [121.92]	48 [121.92]	49 [124.46]	in [cm]
Cable Outer Diameter	0.155	0.16	0.165	in
Weight			0.29 [131.54]	lbs [g]

Cable Characteristics

Description	Specification
Cable Type	ET-P160LL
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper, Silver
Dielectric Type	Expanded PTFE Tape
Number of Shields	3
Shield Layer 1	Silver Plated Copper
Shield Layer 2	Aluminum Polyester
Shield Layer 3	Silver Plated Copper Wire
Jacket Material	FEP

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Connector Characteristics

Description	Connector 1	Connector 2
Type	N Male	N Male
Specification	MIL-STD-348	MIL-STD-348
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Beryllium Copper, Gold over Nickel	Beryllium Copper, Gold over Nickel
Contact Plating Specification	50 µin minimum	50 µin minimum
Dielectric Type	PTFE	PTFE
Body Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Body Plating Specification	SAE-AMS-2700	SAE-AMS-2700
Coupling Nut Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Plating Specification	SAE-AMS-2700	SAE-AMS-2700
Hex Size	3/4 inch	3/4 inch
Seal Gasket Material	Silicone Rubber	Silicone Rubber
Contact Gage Specification	0.210 in min	0.210 in min

Mechanical Specification Notes:

Environmental Specifications

Description	Specification
Temperature Operating Range	-55 to +125 deg C

Compliance Certifications (see product page for current document)

Process Specifications

Process	Specification
Cable Preconditioning	5 cycles, -55 °C to +125°C, 20 minute dwells
Soldering	in accordance with J-STD-001, class 3
Marking	shall meet the adherence requirements of SAE AS5942
Workmanship	shall be in accordance with IPC/WHMA-A-620, class 3

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Tests and Inspections

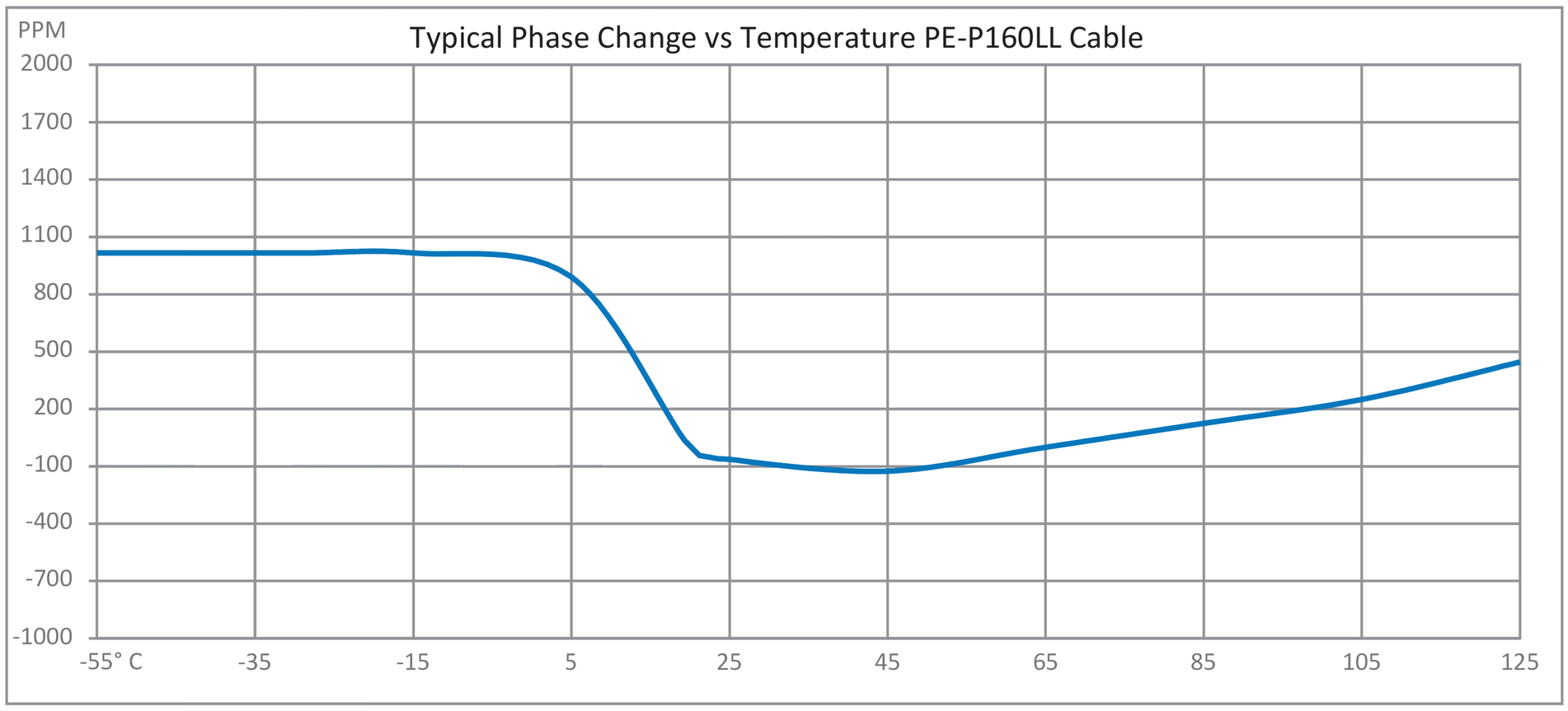
Description	Sampling
Connector Gaging (pin and insulator position)	100%
Insertion Loss	100%
VSWR	100%
Dielectric Withstanding Voltage (DWV)	100%
Visual -workmanship, configuration and marking	100%
Length	C=0, 1.5AQL
Mass	C=0, 1.5AQL

Plotted and Other Data

Notes:

- Values at 25°C, sea level.

Typical Performance Data



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RF Cable Assemblies Technical Data Sheet ET29543

How to Order

Part Number Configuration: **ET3M0219 - xx uu**

- **uu** — Unit of Measure:
  - cm = Centimeters
  - <blank> = Inches
- **xx** — Length
- **ET3M0219** — Base Number

Example: ET3M0219-12 = 12 inches long cable
ET3M0219-100cm = 100 cm long cable

Cable Assembly Length Tolerances:

Imperial English		Metric	
"L" ≤ 1 ft	+0.5 in / -0 in	"L" ≤ 0.3 m	+12.5 mm / -0 mm
1 ft < "L" ≤ 5 ft	+1 in / -0 in	0.3 m < "L" ≤ 1.5 m	+25 mm / -0 mm
5 ft < "L" ≤ 10 ft	+2 in / -0 in	1.5 m < "L" ≤ 3 m	+50 mm / -0 mm
10 ft < "L" ≤ 25 ft	+3 in / -0 in	3 m < "L" ≤ 7.5 m	+75 mm / -0 mm
25 ft < "L"	+2%"L" / -0%"L"	7.5 m < "L"	+2%"L" / -0%"L"

* Cable Length = "L"

Temperature Conditioned N Male to N Male Low Loss Cable 48 Inch Length Using ET-P160LL Coax from Ebeestock Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: Temperature Conditioned N Male to N Male Low Loss Cable 48 Inch Length Using ET-P160LL Coax ET29543

URL: https://www.ebeestock.com/temperature-conditioned-n-male-to-n-male-low-loss-cable-8-inch-length-using-pe-p160ll-coax-0029537

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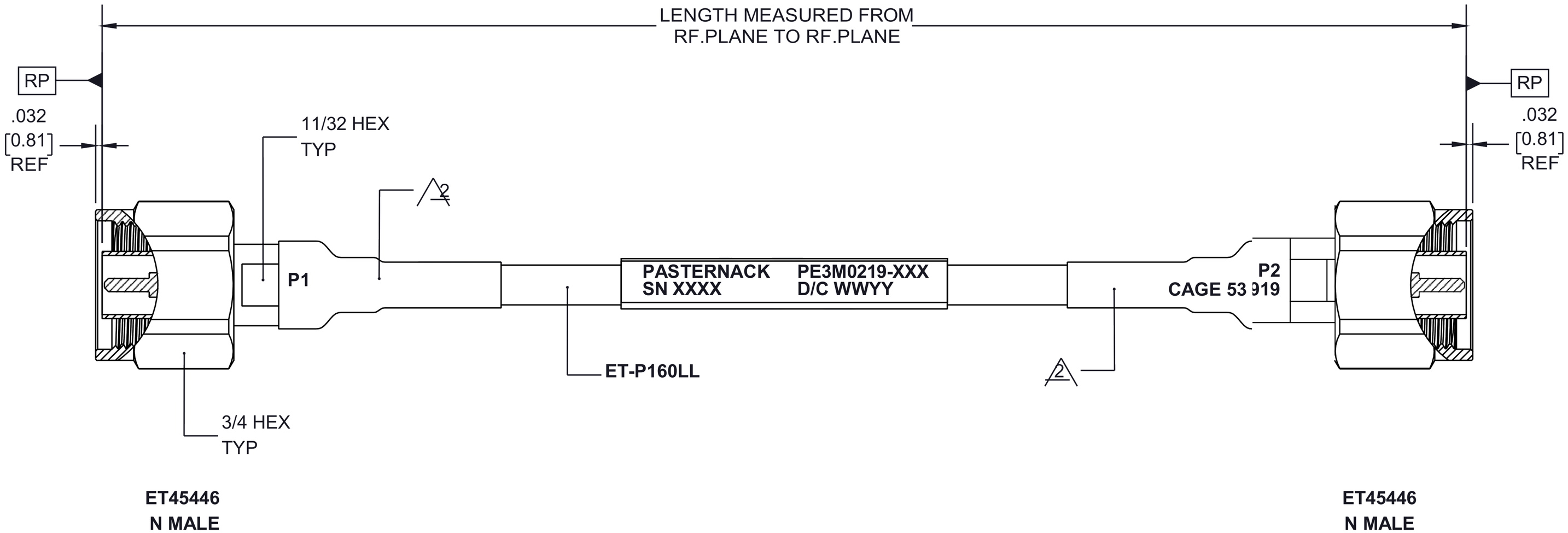
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	02/12/19	D.BIRCH



NOTES:

1. ALL BLACK HEAT SHRINK WITH WHITE MARKINGS.
2. TOP LAYER: SUMITUBE W3B2 (4X) - SIZE 12/3.
   BOTTOM LAYER: M23053/4-303-0.

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UNLESS OTHERWISE SPECIFIED
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DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:

.X=± .2 [5.08] | FRACTIONS
.XXX=± .005 [.13] | ANGLES ± 1°

ALL DIMENSIONS SHOWN
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THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

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