



RF Cable Assemblies Technical Data Sheet

PE3M0179-36

Configuration

- Connector 1: ET44816 (N Male Right Angle) Connector 2: ET44816 (N Male Right Angle)
- Cable: ET38353

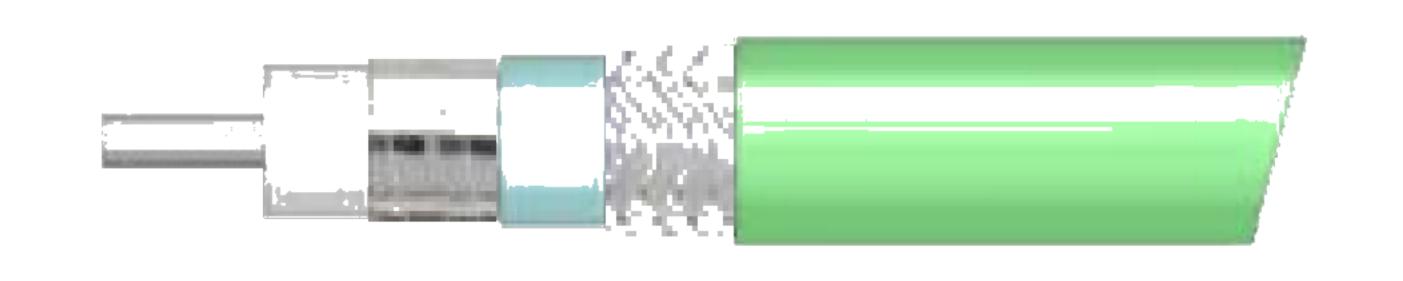
Features

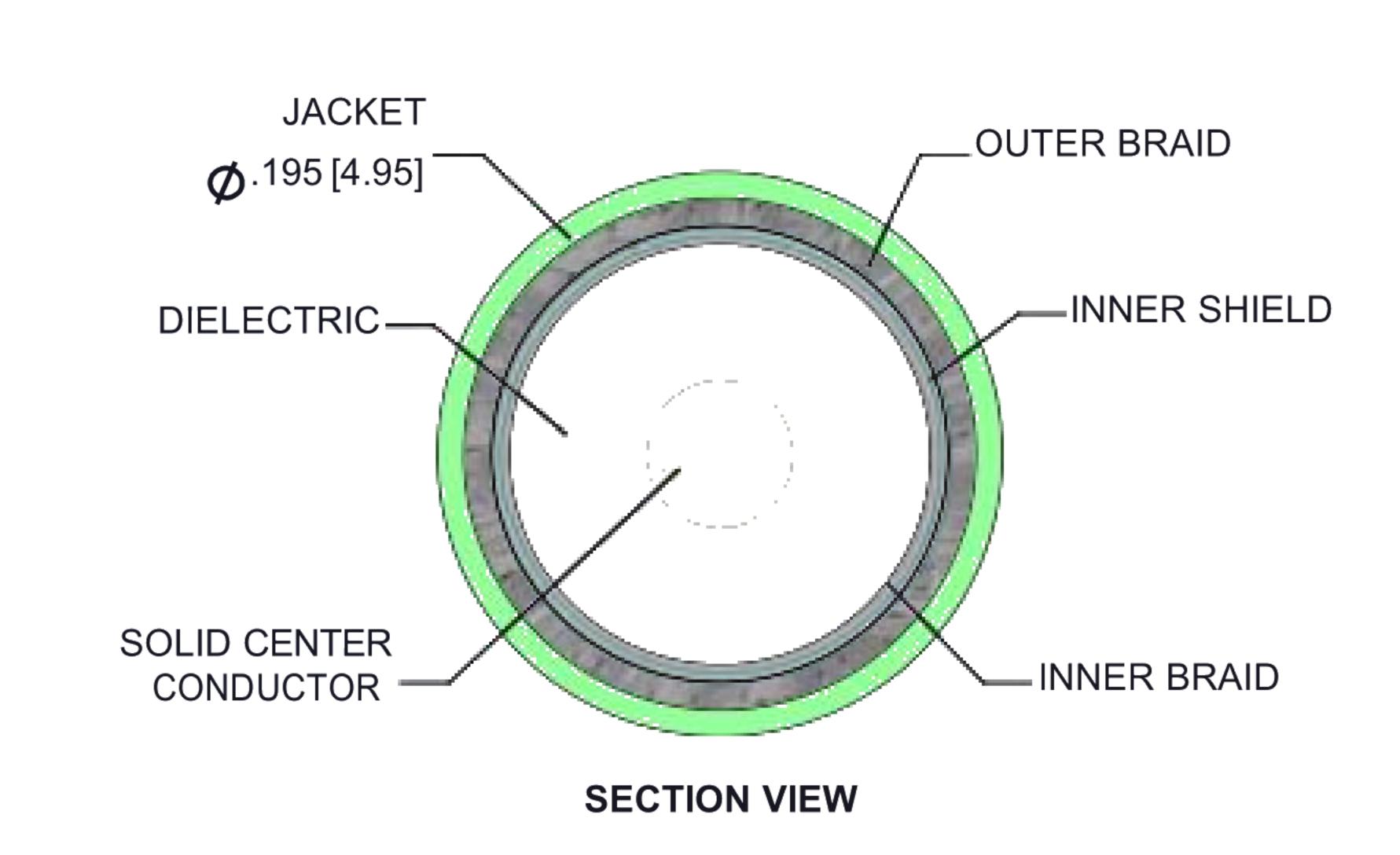
- Max Frequency 18 GHz
- 80% Phase Velocity
- Triple Shielded
- FEP Jacket
- Thermally Pre-Conditioned Cable
- Captivated Stainless Steel Connectors
- Expanded PTFE dielectric
- J-STD-Soldering
- Lot Traceability
- Test Report
- Ship same day

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 conditioned 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

Requirements and Acceptance for Cable and Wire Harness Assemblies IPC/WHMA-A-620

Radio Frequency Connector Interfaces for MIL-DTL-3643, MIL-DTL-3650, MIL-DTL-3655, MIL-MIL-STD-348

DTL-25516, MIL-PRF-31031, MIL-PRF-39012, MIL-PRF-49142, MIL-PRF...

Requirements for Soldered Electrical and Electronic Assemblies IPC J-STD-001

Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for IPC J-STD-006

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 Right Angle to N Male Right Angle Low Loss Cable 36 Inch Length Using ET38353 Coax ET29530





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SAE AS5942 SAE AS23053 Marking of Electrical Insulating Materials

Insulation Sleeving, Electrical, Heat Shrinkable, General Specifications For

Material Specifications

Component	Specification
Cable	ET38353 in accordance with ET38353 datasheet
Connector 1	ET44816 in accordance with MIL-STD-348
Connector 2	ET44816 in accordance with MIL-STD-348
Heat Shrink 1	SUMITUBE W3B2(4X) SIZE 24/6 in accordance with SAE AS23053 (AS APPLICABLE)
Heat Shrink 2	SUMITUBE W3B2(4X) SIZE 24/6 in accordance with SAE AS23053 (AS APPLICABLE)
Heat Shrink 3	M23053/4-304-0 in accordance with SAE AS23053
Heat Shrink 4	M23053/4-304-0 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			1.44:1	
Velocity of Propagation		80		%
Capacitance		25 [82.02]		pF/ft [pF/m]
Dielectric Withstanding Voltage (AC)			750	Vrms

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	1	2	4.5	9	18	GHz
Insertion Loss (Max.)	0.45	0.65	0.95	1.38	1.98	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 0.1*SQRT(FGHz) dB per connector.

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Mechanical Specifications

Cable Assembly

Description	Minimum	Typical	Maximum	Units
Length*	36 [914.4]	36 [914.4]	37 [939.8]	in [mm]
Cable Outer Diameter	0.19	0.195	0.2	in
Weight			0.37 [167.83]	lbs [g]

Cable Characteristics

Description	Specification	
Cable Type	ET38353	
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 Tape	
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 Right Angle	N Male Right Angle
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 SAEAS5942
Workmanship	shall be in accordance with IPC/WHMA-A-620, class 3

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Tests and Inspections

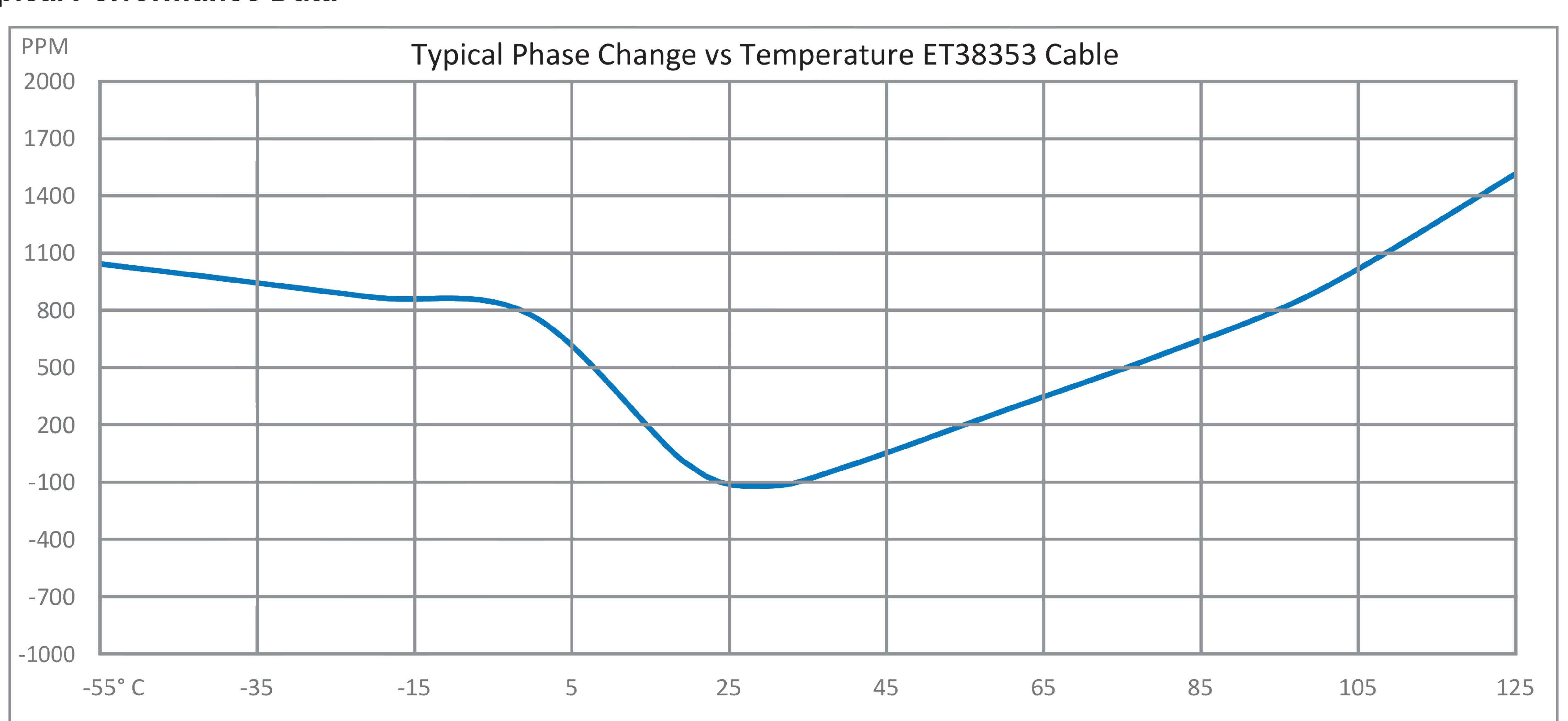
Description	Sampling
Connector Gaging (pin and insulator position)	100%
Insertion Loss	100%
VSWR	100%
Dielectric Withstanding Voltage (DWV)	100%
Visual -workmanship, configuration and marking	100%
Length	C=0, 1.5AQL
Mass	C=0, 1.5AQL

Plotted and Other Data

Notes

Values at 25°C, sea level.

Typical Performance Data



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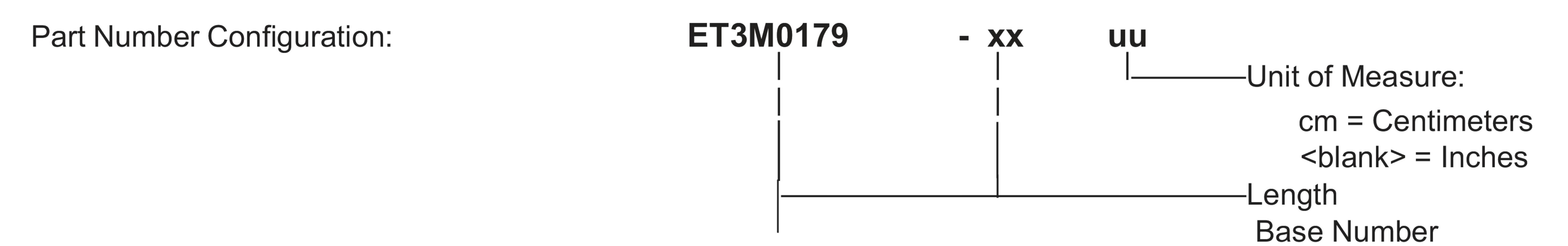




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How to Order



Example: ET3M0179-12 = 12 inches long cable

ET3M0179-100cm = 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 Right Angle to N Male Right Angle Low Loss Cable 36 Inch Length Using ET38353 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.

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URL: https://www.ebeestock.com/temperature-conditioned-n-male-right-angle-to-n-male-right-angle-low-loss-cable-12-inch-length-using-pe-p142ll-coax-0029527

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Ebeestock reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Ebeestock does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Ebeestock does not assume any liability arising out of the use of any part or documentation.

