



N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500

RF Connectors Technical Data Sheet



TC-500-NM-LP

Times Microwave Systems Connector Specification

Configuration

- N Male Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: SPO-500, SPP-500
- Low PIM Design

Features

- Max. Operating Frequency 6 GHz
- Excellent VSWR of 1.25:1
- PIM levels lower than -160 dBc
- Silver Plated Brass Contact
- 200 μ m contact plating

Applications

- General Purpose Test
- Custom Cable Assemblies
- Distributed Antenna Systems (DAS)
- Wireless Communications
- Low PIM Applications

Description

Times Microwave's TC-500-NM-LP type N male connector offered by Pasternack with solder/solder attachment for Times' SPO-500 and SPP-500 is part of our full line of RF components available for same-day shipping. Times Microwave's type N male connector operates up to a maximum frequency of 6 GHz and offers excellent VSWR of 1.25:1. The Times type N male connector also has low passive intermodulation of -160 dBc.

Times Microwave's type N male connector TC-500-NM-LP datasheet specifications and drawing with dimensions are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. Whether the need is to provide an I/O for a board design, or simply create a custom cable assembly configuration, Pasternack has the right connector for the job. Pasternack can also expertly build your custom cable assemblies for you and ship same-day.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		6	GHz
VSWR			1.25:1	
Insertion Loss			0.25	dB
Passive Intermodulation			-160	dBc
Operating Voltage (DC)			2,000	Vdc
Insulation Resistance	5,000			MOhms

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500 TC-500-NM-LP](#)



N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500

RF Connectors Technical Data Sheet



TC-500-NM-LP

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3	3 to 6				GHz
VSWR, Max	1.1:1	1.25:1				

Electrical Specification Notes:
Insertion Loss is 0.1*sqrt(FGHz)

Mechanical Specifications

Size

Length	1.24 in [31.5 mm]
Mating Cycles	500 Cycles
Mating Torque	6 to 10 in-lbs [0.68 to 1.13 Nm]

Material Specifications

Description	Material	Plating
Contact	Brass	Silver 200 µin
Insulation	PTFE	
Body	Brass	Tri-Metal 80 µin
Coupling Nut	Brass	Tri-Metal 80 µin
Gasket	Silicone	

Environmental Specifications

Temperature

Operating Range	-40 to +125 deg C
Shock	MIL-STD 202G, Meth.213, Cond I
Vibration	MIL-STD 202G, Meth.204, Cond B
Thermal Shock	MIL-STD 202G, Meth.107, Cond B

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500 TC-500-NM-LP](#)



N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500

RF Connectors Technical Data Sheet



TC-500-NM-LP

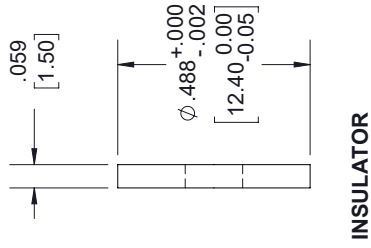
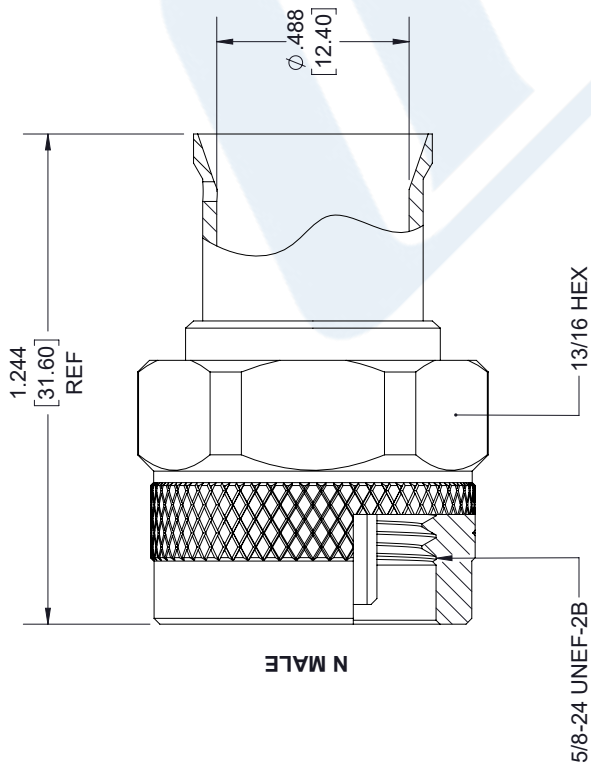
N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500 from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500 TC-500-NM-LP](https://www.pasternack.com/n-male-spo-500-spp-500-connector-tc-500-nm-lp)

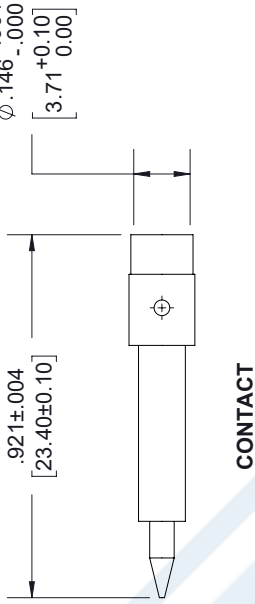
URL: <https://www.pasternack.com/n-male-spo-500-spp-500-connector-tc-500-nm-lp-p.aspx>

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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

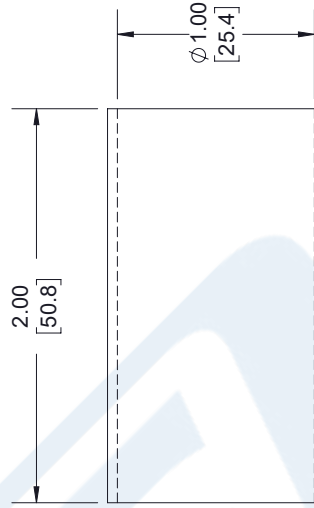
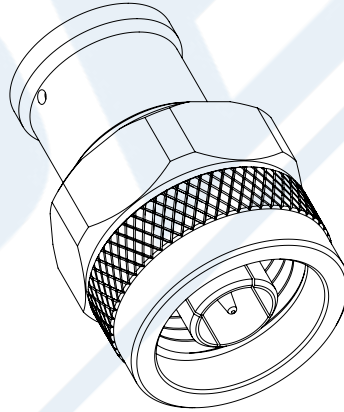
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	6/2/2020	S. SELLIS



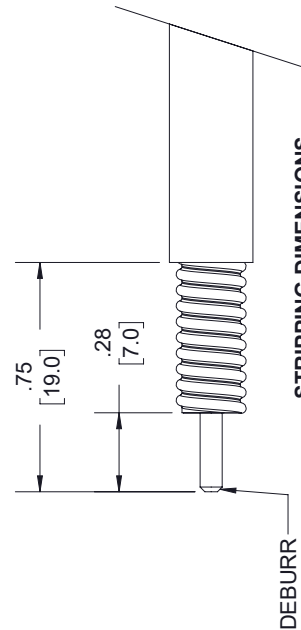
INSULATOR



CONTACT



SHRINK TUBE



STRIPPING DIMENSIONS

- NOTES:**
- CABLE ATTACHMENT:
 - OUTER: SOLDER.
 - INNER: SOLDER.

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
.X = ± .2 [5.08]	± 1/32
.XX = ± .02 [.51]	ANGLES ± 1°
.XXX = ± .005 [.13]	
CABLE LENGTH (L) TOLERANCES:	
L ≤ 12 [305]	± .1 [25] / -0
12 [305] < L ≤ 60 [1524]	± .2 [51] / -0
60 [1524] < L ≤ 120 [3048]	± .4 [102] / -0
120 [3048] < L ≤ 300 [7620]	± .6 [152] / -0
300 [7620] < L ≤ +5% L / -0	
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.	

PE PASTERNAK
 an INFINIT® brand

Pasternack Enterprises, Inc.
 P. O. Box 16759, Irvine, CA 92623.
 Phone: 1.949.261.1920 | 1.866.727.8376
 Fax: 1.949.261.7451
 Website: www.pasternack.com
 E-mail: sales@pasternack.com

ITEM NO. TC-500-NM-LP

SIZE A | CAGE CODE A | DRAWN BY K.DANG

THIRD-ANGLE PROJECTION	THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.
SHEET 1	OF 1
SCALE	N/A
REV	A



N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500

RF Connectors Technical Data Sheet



TC-500-NM-LP

Times Microwave Systems Connector Specification

Configuration

- N Male Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: SPO-500, SPP-500
- Low PIM Design

Features

- Max. Operating Frequency 6 GHz
- Excellent VSWR of 1.25:1
- PIM levels lower than -160 dBc
- Silver Plated Brass Contact
- 200 μ m contact plating

Applications

- General Purpose Test
- Custom Cable Assemblies
- Distributed Antenna Systems (DAS)
- Wireless Communications
- Low PIM Applications

Description

Times Microwave's TC-500-NM-LP type N male connector offered by Pasternack with solder/solder attachment for Times' SPO-500 and SPP-500 is part of our full line of RF components available for same-day shipping. Times Microwave's type N male connector operates up to a maximum frequency of 6 GHz and offers excellent VSWR of 1.25:1. The Times type N male connector also has low passive intermodulation of -160 dBc.

Times Microwave's type N male connector TC-500-NM-LP datasheet specifications and drawing with dimensions are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. Whether the need is to provide an I/O for a board design, or simply create a custom cable assembly configuration, Pasternack has the right connector for the job. Pasternack can also expertly build your custom cable assemblies for you and ship same-day.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		6	GHz
VSWR			1.25:1	
Insertion Loss			0.25	dB
Passive Intermodulation			-160	dBc
Operating Voltage (DC)			2,000	Vdc
Insulation Resistance	5,000			MOhms

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500 TC-500-NM-LP](#)



N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500

RF Connectors Technical Data Sheet



TC-500-NM-LP

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3	3 to 6				GHz
VSWR, Max	1.1:1	1.25:1				

Electrical Specification Notes:
Insertion Loss is 0.1*sqrt(FGHz)

Mechanical Specifications

Size

Length	1.24 in [31.5 mm]
Mating Cycles	500 Cycles
Mating Torque	6 to 10 in-lbs [0.68 to 1.13 Nm]

Material Specifications

Description	Material	Plating
Contact	Brass	Silver 200 µin
Insulation	PTFE	
Body	Brass	Tri-Metal 80 µin
Coupling Nut	Brass	Tri-Metal 80 µin
Gasket	Silicone	

Environmental Specifications

Temperature

Operating Range	-40 to +125 deg C
Shock	MIL-STD 202G, Meth.213, Cond I
Vibration	MIL-STD 202G, Meth.204, Cond B
Thermal Shock	MIL-STD 202G, Meth.107, Cond B

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500 TC-500-NM-LP](#)



N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500

RF Connectors Technical Data Sheet



TC-500-NM-LP

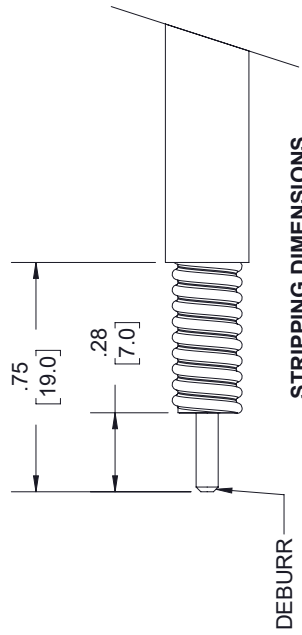
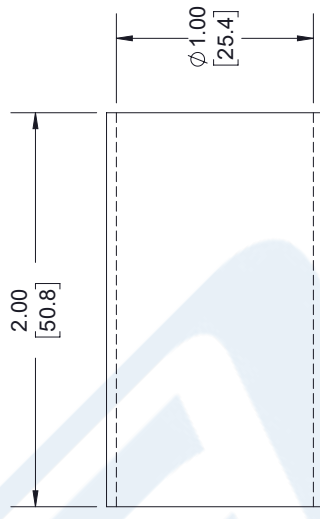
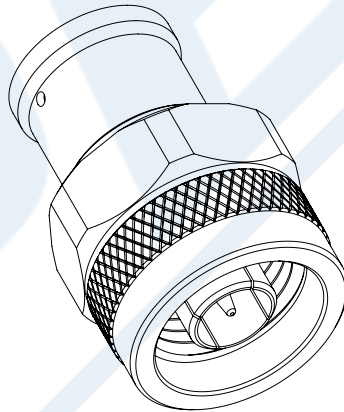
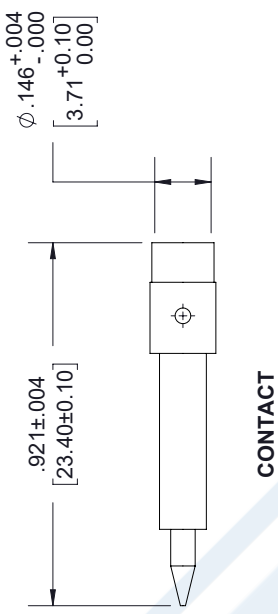
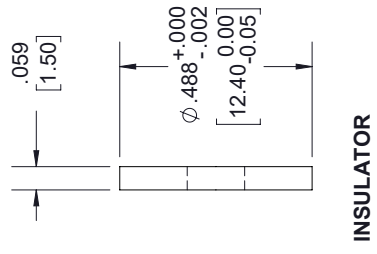
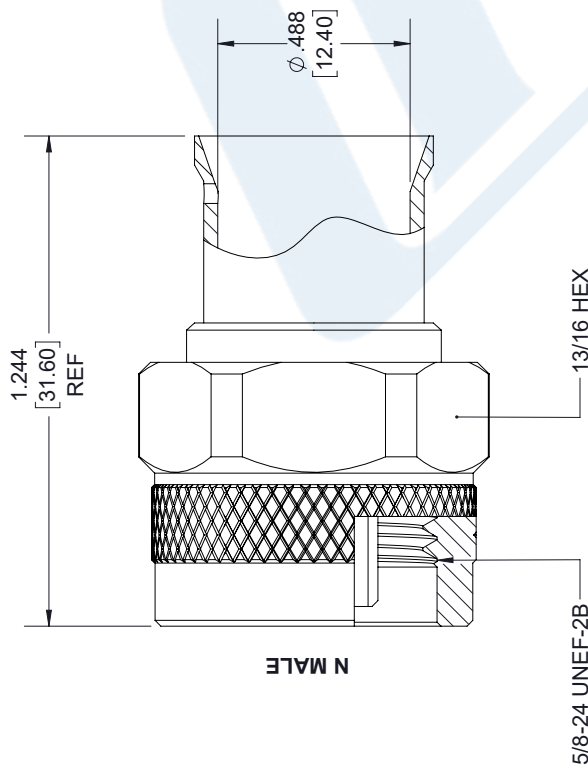
N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500 from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Low PIM Connector Solder Attachment for SPO-500, SPP-500 TC-500-NM-LP](https://www.pasternack.com/n-male-spo-500-spp-500-connector-tc-500-nm-lp)

URL: <https://www.pasternack.com/n-male-spo-500-spp-500-connector-tc-500-nm-lp-p.aspx>

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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	6/2/2020	S. SELLIS



- NOTES:**
- CABLE ATTACHMENT:
 - OUTER: SOLDER.
 - INNER: SOLDER.

 THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.	SHEET 1 OF 1
	SCALE N/A
	
Pasternack Enterprises, Inc. P. O. Box 16759, Irvine, CA 92623. Phone: 1.949.261.1920 1.866.727.8376 Fax: 1.949.261.7451 Website: www.pasternack.com E-mail: sales@pasternack.com	
SIZE A CAGE CODE 53919 DRAWN BY K.DANG	ITEM NO. TC-500-NM-LP REV. A

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

.X = ±.2	[5.08]	FRACTIONS	± 1/32
.XX = ±.02	[.51]	ANGLES ± 1°	
.XXX = ±.005	[.13]	CABLE LENGTH (L) TOLERANCES:	
		L ≤ 12 [305]	= +1 [25] / -0
		12 [305] < L ≤ 60 [1524]	= +2 [51] / -0
		60 [1524] < L ≤ 120 [3048]	= +4 [102] / -0
		120 [3048] < L ≤ 300 [7620]	= +6 [152] / -0
		300 [7620] < L = +5% / L / -0	

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.



Low Loss SPO-500 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated

RF Cables Technical Data Sheet

Times Microwave Systems Coax Cable Specification

Configuration

- Low Loss Corrugated Cable
- 1 Shield(s)

Features

- PIM < -160 dBc
- Lightweight and Super Flexible
- Low Loss Dielectric 83% VoP
- Shielding > 100 dB
- Durable Black Polyethylene Outer Jacket
- Outdoor Rated

Applications

- Distributed Antenna Systems (DAS)
- Antenna Installations
- Small Cell
- Outdoor Applications
- Commination Tower Install

Description

SPO-500 low loss outdoor rated coax cable by Times Microwave is part of our full line of RF components available for same-day shipping. The SPO-500 coaxial cable features a low loss dielectric with an 83% velocity of propagation (VoP), BCCAL center conductor and a helically corrugated, copper outer conductor. These features combine to make the Times Microwave SPO-500 a superflexible, low PIM coax cable that is well suited for use as an antenna jumper cable, Distributed Antenna Systems (DAS), small cell, and other outdoor applications. The tough, black polyethylene jacket provides moisture and UV protection and is suitable for outdoor use.

Our datasheet specifications and drawing with dimensions for Times Microwave SPO-500 coax cable are shown below in this PDF. Whether the need is to provide a low PIM jumper connection, low PIM feeder cable or simply create a custom cable assembly configuration, Pasternack has the right SPO-500 cable assembly for the job. See our web site to find the right connector cable combination for your application.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		6	GHz
Impedance		50		Ohms
Velocity of Propagation		83		%
Passive Intermodulation			-158	dBc
Nominal Capacitance		24 [78.74]		pF/ft [pF/m]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low Loss SPO-500 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated SPO-500](#)



Low Loss SPO-500 Rated Corrugated Coax Cable with
Black PE Jacket Superflexible Outdoor Rated

RF Cables
Technical Data Sheet

Performance by Frequency Band

Description	F1	F2	F3	F4	F5	Units
Frequency	0.5	1	2	6		GHz
Attenuation, Typ	2.43	3.51	5.12	9.6		dB/100ft
	7.97	11.52	16.8	31.5		dB/100m
Input Power (CW), Max	1,260	900	610	260		Watts

Mechanical Specifications

Diameter	0.53 in [13.46 mm]
Weight	0.121 lbs/ft [0.18 Kg/m]
Min. Bend Radius (Installation)	2.25 in [57.15 mm]

Construction Specifications

Description	Material and Plating	Diameter
Inner Conductor	Copper Clad Aluminum ¹	0.14 in 3.56 mm
Conductor Type	Solid	
Dielectric	Foam PE	0.35 in 8.89 mm
Outer Conductor	Copper Corrugated	0.48 in 12.19 mm
Jacket	PE, Black	0.53 in [13.46 mm]

Environmental Specifications

Temperature	
Operating Range	-40 to +85 deg C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low Loss SPO-500 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated SPO-500](#)



Low Loss SPO-500 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated

RF Cables Technical Data Sheet

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Low Loss SPO-500 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated from Pasternack 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.

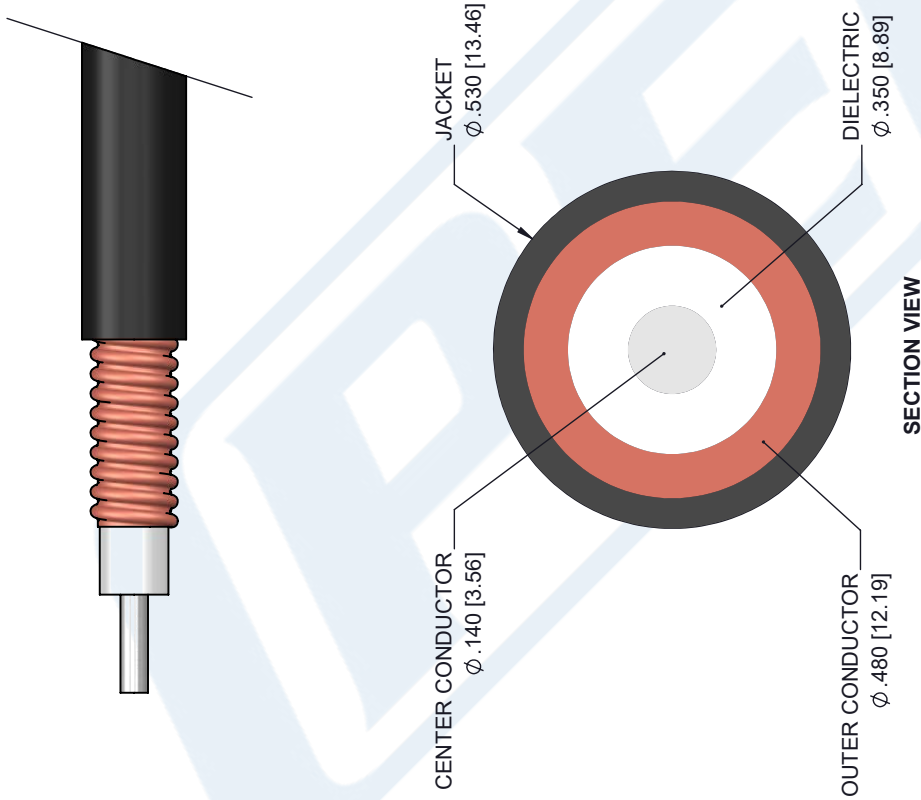
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low Loss SPO-500 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated SPO-500](#)

URL: <https://www.pasternack.com/low-loss-corrugated-spo500-pe-jacket-spo-500-p.aspx>

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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

TIMES MICROWAVE SYSTEMS **SPO-500 CAD Drawing**
 Low Loss SPO-500 Rated Corrugated Coax Cable with
 Black PE Jacket Superflexible Outdoor Rated

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	03/04/19	S. ELLIS



UNLESS OTHERWISE SPECIFIED
 LEADING DIMENSIONS ARE INCHES
 DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

X±.2	[5.08]	FRACTIONS	
XX±.01	[.25]		+1/32
XXX±.005	[.13]		ANGLES ± 1°

ALL DIMENSIONS SHOWN
 ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

		THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.	
Pasternack Enterprises, Inc. P. O. Box 16759, Irvine, CA 92623. Phone: 1.949.261.1920 1.866.727.8376 Fax: 1.949.261.7451 www.pasternack.com e-mail: sales@pasternack.com		SHEET 1 OF 1	SCALE N/A
SIZE A	CAGE 53919	DRAWN BY K.DANG	PART NUMBER SPO-500
			REV A

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.