



4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet

PE45651

Configuration

- 4.1/9.5 Mini DIN Male Connector
- 50 Ohms
- Right Angle Body Geometry
- Connector Interface Types: PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250
- Low PIM Design

Features

- Max. Operating Frequency 6 GHz
- PIM levels lower than -160 dBc
- Silver Plated Brass Contact

Applications

- General Purpose Test
- Custom Cable Assemblies
- Wireless Communications
- Low PIM Applications

Description

Pasternack's PE45651 4.1/9.5 Mini DIN male right angle connector with solder/solder attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250 and SPF-250 is part of our full line of RF components available for same-day shipping. Our 4.1/9.5 Mini DIN male connector operates up to a maximum frequency of 6 GHz. The 4.1/9.5 Mini DIN male connector also has low passive intermodulation of -160 dBc. Its right angle body geometry allows for easier connections in tight spaces.

Our 4.1/9.5 Mini DIN male right angle connector PE45651 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
Passive Intermodulation			-160	dBc
Dielectric Withstanding Voltage (AC)			1,000	Vrms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3					GHz
VSWR, Max	1.15:1					

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 PE45651](#)



4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet

PE45651

Mechanical Specifications

Size

Length	1.11 in [28.19 mm]
Width/Dia.	0.94 in [23.88 mm]

Material Specifications

Description	Material	Plating
Contact	Brass	Silver
Insulation	PTFE	
Body	Brass	Tri-Metal
Coupling Nut	Brass	Tri-Metal
O-Ring	Silicone	

Mechanical Specification Notes:
Interface Conforms to IEC 61169-11

Environmental Specifications

Temperature

Operating Range	-40 to +155 deg C
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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: [4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 PE45651](#)



4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet

PE45651

4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 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: [4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 PE45651](https://www.pasternack.com/4.1-9.5-mini-din-male-pe-1-4sfhc-spp-250-llpl-connector-pe45651-p.aspx)

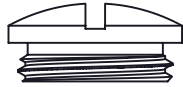
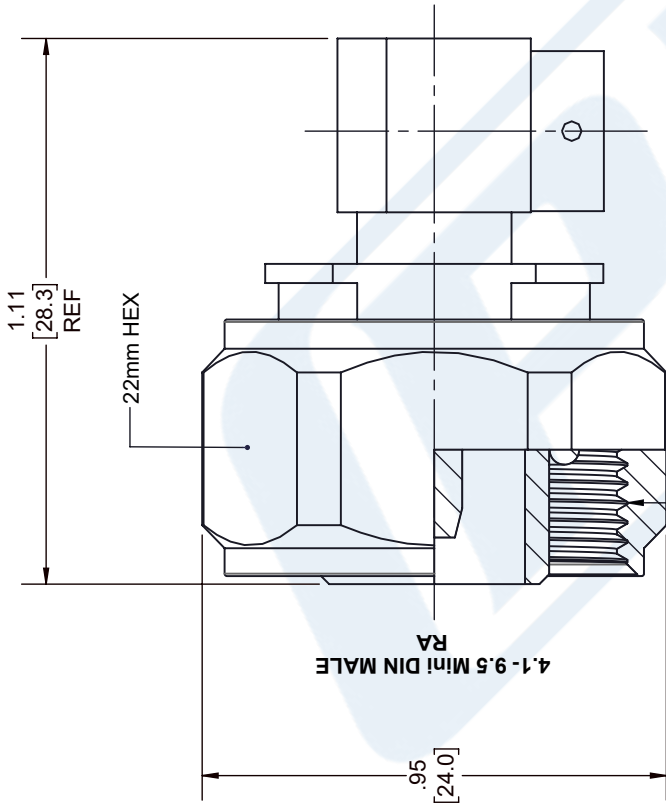
URL: <https://www.pasternack.com/4.1-9.5-mini-din-male-pe-1-4sfhc-spp-250-llpl-connector-pe45651-p.aspx>

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PE45651 CAD Drawing

4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment
for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

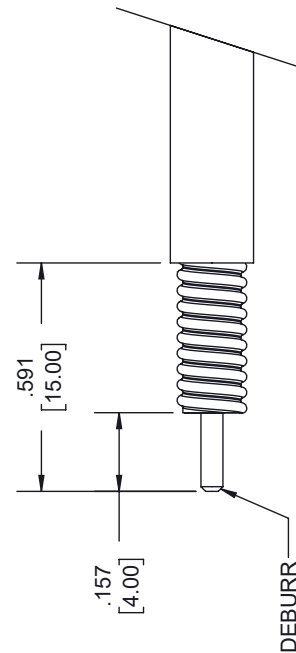
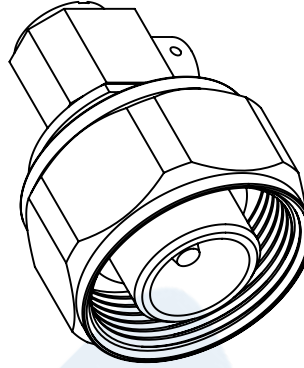
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	1/8/2021	S. ELLIS



COUPLING NUT



PTFE INSULATOR



STRIPPING DIMENSIONS

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

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

TOLERANCES:	
.X = ± .2	[.008]
.XX = ± .02	[.51]
.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% / -0
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.	

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV A



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ITEM NO. PE45651

DRAWN BY K.DANG

CAGE CODE 53919

SIZE A

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N Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet

PE45665

Configuration

- N Male Connector
- 50 Ohms
- Right Angle Body Geometry

- Connector Interface Types: PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250
- Low PIM Design

Features

- Max. Operating Frequency 6 GHz
- PIM levels lower than -160 dBc

- Silver Plated Brass Contact

Applications

- General Purpose Test
- Custom Cable Assemblies
- Wireless Communications
- Low PIM Applications

Description

Pasternack's PE45665 type N male right angle connector with solder/solder attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250 and SPF-250 is part of our full line of RF components available for same-day shipping. Our type N male connector operates up to a maximum frequency of 6 GHz. The type N male connector also has low passive intermodulation of -160 dBc. Its right angle body geometry allows for easier connections in tight spaces.

Our type N male right angle connector PE45665 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
Passive Intermodulation			-160	dBc
Dielectric Withstanding Voltage (AC)			750	Vrms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3	3 to 6				GHz
VSWR, Max	1.25:1	1.35:1				

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 PE45665](#)



N Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet

PE45665

Mechanical Specifications

Size

Length	1.23 in [31.24 mm]
Width/Dia.	0.85 in [21.59 mm]
Weight	0.11 lbs [49.9 g]

Material Specifications

Description	Material	Plating
Contact	Brass	Silver
Insulation	PTFE	
Body	Brass	Tri-Metal
Coupling Nut	Brass	Tri-Metal

Mechanical Specification Notes:
Interface Conforms to IEC 61169-16

Environmental Specifications

Temperature

Operating Range	-40 to +155 deg C
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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 Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 PE45665](#)



N Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet

PE45665

N Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 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 Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 PE45665](https://www.pasternack.com/n-male-pe-1-4sfhc-spp-250-llpl-connector-pe45665-p.aspx)

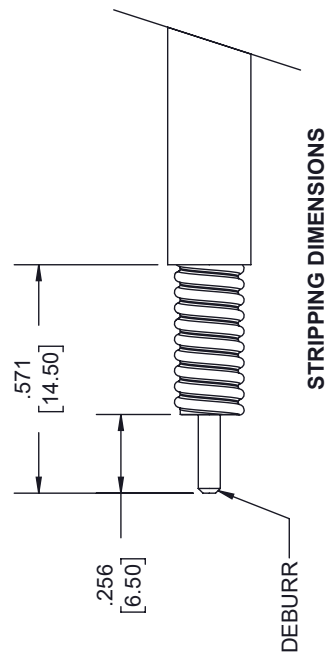
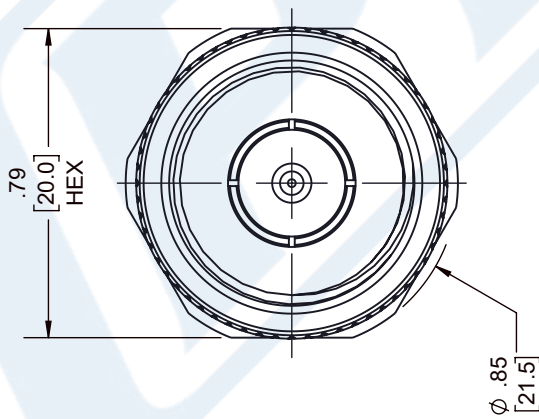
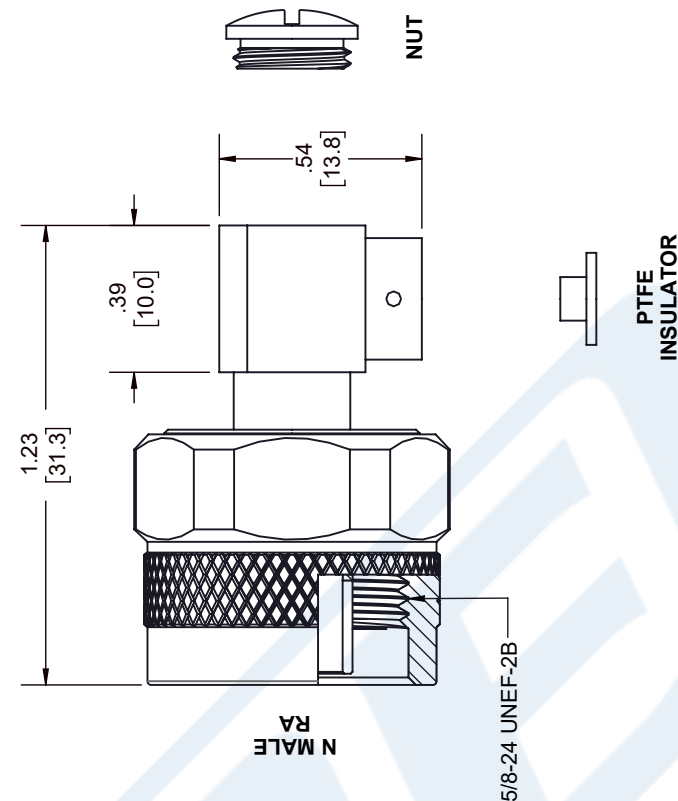
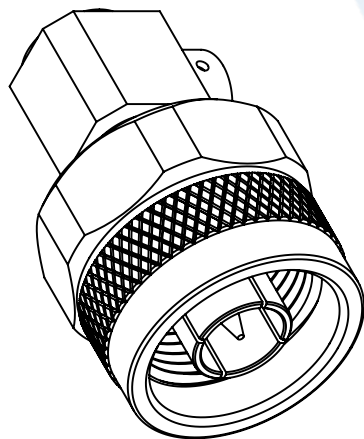
URL: <https://www.pasternack.com/n-male-pe-1-4sfhc-spp-250-llpl-connector-pe45665-p.aspx>

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PE45665 CAD Drawing

N Male Right Angle Low PIM Connector Solder Attachment for
PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	1/11/2021	S. ELLIS



STRIPPING DIMENSIONS

NOTES:

1. CABLE ATTACHMENT:
• OUTER: SOLDER.
• INNER: SOLDER.

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

TOLERANCES:	
X = ± .2	[5.08]
.XX = ± .02	[.51]
.XXX = ± .005	[.13]
ANGLES ± 1°	
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% / -0

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.



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SHEET 1 OF 1

SCALE N/A

REV A



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ITEM NO. PE45665

SIZE A CAGE CODE 53919 DRAWN BY K.DANG

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Low Loss SPO-250 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated

RF Cables Technical Data Sheet



SPO-250

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
- Commutation Tower Install

Description

SPO-250 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-250 coaxial cable features a low loss dielectric with an 83% velocity of propagation (VoP), solid copper center conductor and a helically corrugated, copper outer conductor. These features combine to make the Times Microwave SPO-250 a super flexible, 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-250 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-250 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		5.8	GHz
Impedance		50		Ohms
Velocity of Propagation		83		%
Passive Intermodulation			-160	dBc
Nominal Capacitance		24 [78.74]		pF/ft [pF/m]
Nominal Inductance		0.054 [0.18]		uH/ft [uH/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-250 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated SPO-250](#)



Low Loss SPO-250 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated

RF Cables Technical Data Sheet


SPO-250

Performance by Frequency Band

Description	F1	F2	F3	F4	F5	Units
Frequency	0.45	1.5	2	2.5	5.8	GHz
Attenuation, Typ	4.1	7.8	9.13	10.33	16.65	dB/100ft
	13.45	25.59	29.95	33.89	54.63	dB/100m
Input Power (CW), Max	1,110	580	500	440	280	Watts

Mechanical Specifications

Diameter	0.303 in [7.7 mm]
Weight	0.052 lbs/ft [0.08 Kg/m]
Min. Bend Radius (Installation)	1.25 in [31.75 mm]
Bending Moment	0.5 lbs-ft [0.68 N-m]

Construction Specifications

Description	Material and Plating	Diameter
Inner Conductor	Copper Clad Aluminum1	0.075 in 1.91 mm
Conductor Type	Solid	
Dielectric	Foam PE	0.177 in 4.5 mm
Outer Conductor	Copper Corrugated	0.252 in 6.4 mm
Jacket	PE, Black	0.303 in [7.7 mm]

Environmental Specifications

Temperature Operating Range	-40 to +85 deg C
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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-250 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated SPO-250](#)



Low Loss SPO-250 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated

RF Cables Technical Data Sheet



SPO-250

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

Plotted and Other Data

Notes:

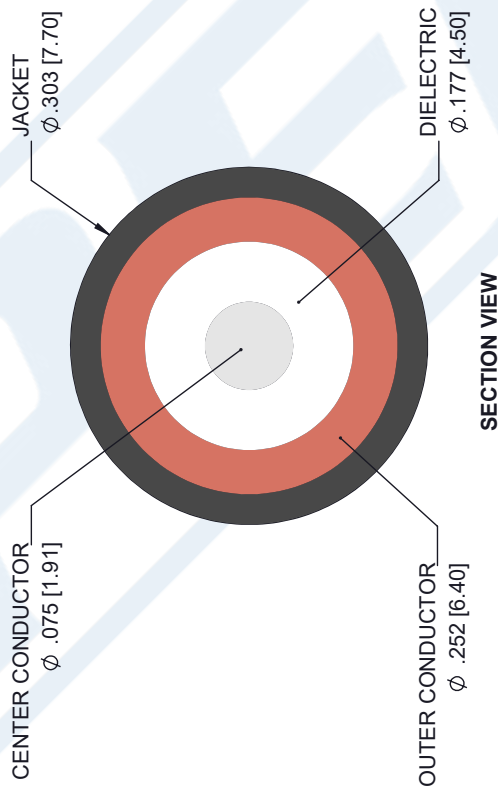
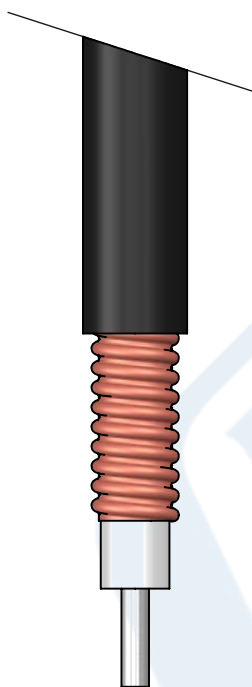
Low Loss SPO-250 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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URL: <https://www.pasternack.com/low-loss-corrugated-spo250-pe-jacket-spo-250-p.aspx>

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



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TOLERANCES:				SHEET 1 OF 1	
X±.2	2 [5.08]	FRACTIONS		SCALE	
XX±.01	1 [25]	± 1/32		N/A	
XXX±.005	1 [13]	ANGLES ± 1°		REV A	
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.					
THRU-ANGLE PROJECTION					
 		 			
SIZE (CAGE) DRAWN BY PART NUMBER A 53919 K.DANG SPO-250		www.pasternack.com e-mail: sales@pasternack.com Pastermnack Enterprises, Inc. P.O. Box 16759, Irvine, CA 92623. Phone: 1.949.261.1920 1.866.727.8376 1.949.261.7451			

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