



SMA Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet



TC-250-SM-LP

Times Microwave Systems Connector Specification

Configuration

- SMA Male Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: SPP-250-LLPL, SPF-250, SPO-250, 1/4" Superflexible, PE-1/4SFHC
- Low PIM Design

Features

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.35:1
- PIM levels lower than -155 dBc
- Silver Plated Brass Contact
- 200µin contact plating

Applications

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

Description

Times Microwave's TC-250-SM-LP SMA male connector with solder/solder contact attachment for SPP-250-LLPL, SPO-250, SPF-250 is part of our full line of RF components available for same-day shipping. Times Microwave's SMA male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.35:1. The Times SMA male connector also has low passive intermodulation of -155 dBc.

Times Microwave's SMA male connector TC-250-SM-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			1.35:1	
Insertion Loss			0.25	dB
Passive Intermodulation			-155	dBc
Operating Voltage (DC)			1,000	Vdc
Impedance		50		Ohms
Insulation Resistance	5,000			MOhms

Electrical Specification Notes:
Insertion Loss = $-0.1 \cdot \sqrt{F(\text{GHz})}$

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250 TC-250-SM-LP](#)



SMA Male Low PIM Connector Solder Attachment
for SPP-250-LLPL, SPO-250, SPF-250

RF Connectors
Technical Data Sheet



TC-250-SM-LP

Mechanical Specifications

Size

Length	1.06 in [26.92 mm]
Width	0.35 in [8.89 mm]
Height	0.35 in [8.89 mm]
Weight	0.02 lbs [10.89 g]
Mating Cycles	500 Cycles
Mating Torque	44.25 in-lbs [5 Nm]
Cable Retention Force	112 lbs 50.8 kg

Material Specifications

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

Environmental Specifications

Temperature

Operating Range	-40 to 125 deg C
Shock	MIL-STD 202G, Method 213, Condition I
Vibration	MIL-STD 202G, Method 204, Condition B
Thermal Shock	MIL-STD 202G, Method 107, Condition 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: [SMA Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250 TC-250-SM-LP](#)



SMA Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250

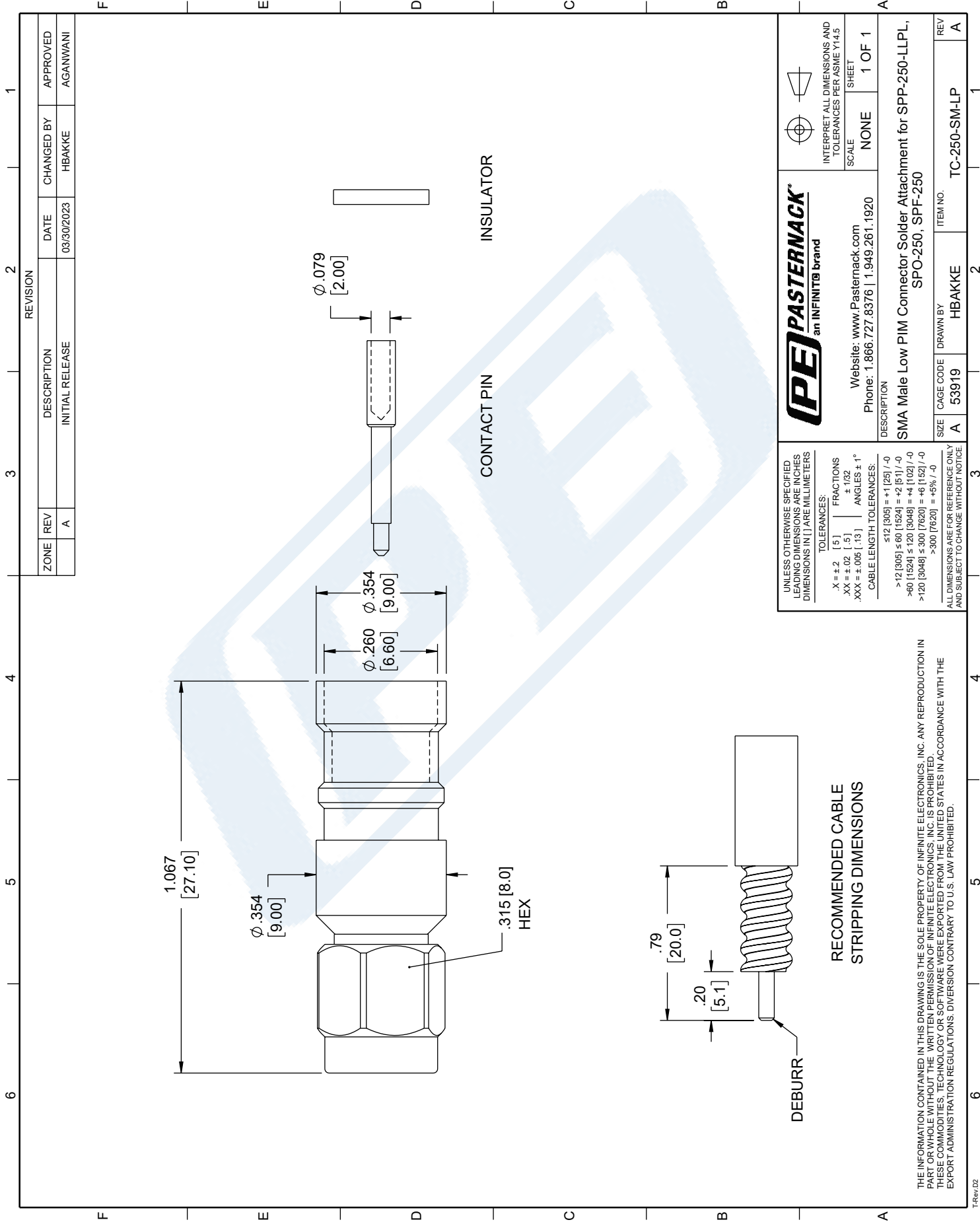
RF Connectors Technical Data Sheet

SMA Male Low PIM Connector Solder Attachment for 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: [SMA Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250 TC-250-SM-LP](https://www.pasternack.com/sma-male-spp-250-llpl-spo-250-connector-tc-250-sm-lp-p.aspx)

URL: <https://www.pasternack.com/sma-male-spp-250-llpl-spo-250-connector-tc-250-sm-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.





N Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet



TC-250-NM-LP

Times Microwave Systems Connector Specification

Configuration

- N Male Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: SPP-250-LLPL, SPO-250, SPF-250
- Low PIM Design

Features

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.35:1
- PIM levels lower than -160 dBc
- Silver Plated Phosphor Bronze Contact
- 196 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-250-NM-LP type N male connector offered by Pasternack with solder/solder attachment for Times' SPP-250-LLPL, SPO-250 and SPF-250 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 good VSWR of 1.35:1. The Times type N male connector also has low passive intermodulation of -160 dBc.

Times Microwave's type N male connector TC-250-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			1.35:1	
Insertion Loss			0.25	dB
Passive Intermodulation			-160	dBc
Operating Voltage (DC)			1,000	Vdc
Inner Conductor DC Resistance			1	mOhms
Outer Conductor DC Resistance			1.5	mOhms
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 SPP-250-LLPL, SPO-250, SPF-250 TC-250-NM-LP](#)



N Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet



TC-250-NM-LP

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				

Electrical Specification Notes:
Insertion Loss is $0.1 \cdot \sqrt{f(\text{GHz})}$

Mechanical Specifications

Size

Length	1.13 in [28.7 mm]
Width/Dia.	0.94 in [23.88 mm]
Mating Torque	7.08 to 9.74 in-lbs [0.80 to 1.10 Nm]

Material Specifications

Description	Material	Plating
Contact	Phosphor Bronze	Silver 196 μ in
Insulation	PTFE	
Body	Brass	Tri-Metal 118 μ in
Coupling Nut	Brass	Tri-Metal 118 μ in
Gasket	Silicone Rubber	

Environmental Specifications

Temperature

Operating Range	-55 to +155 deg C
Humidity	IP67
Shock	US MIL-STD 202G
Vibration	US MIL-STD 202G
Thermal Shock	US MIL-STD 202G

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 SPP-250-LLPL, SPO-250, SPF-250 TC-250-NM-LP](#)



N Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250

RF Connectors Technical Data Sheet



TC-250-NM-LP

N Male Low PIM Connector Solder Attachment for 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 Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250 TC-250-NM-LP](#)

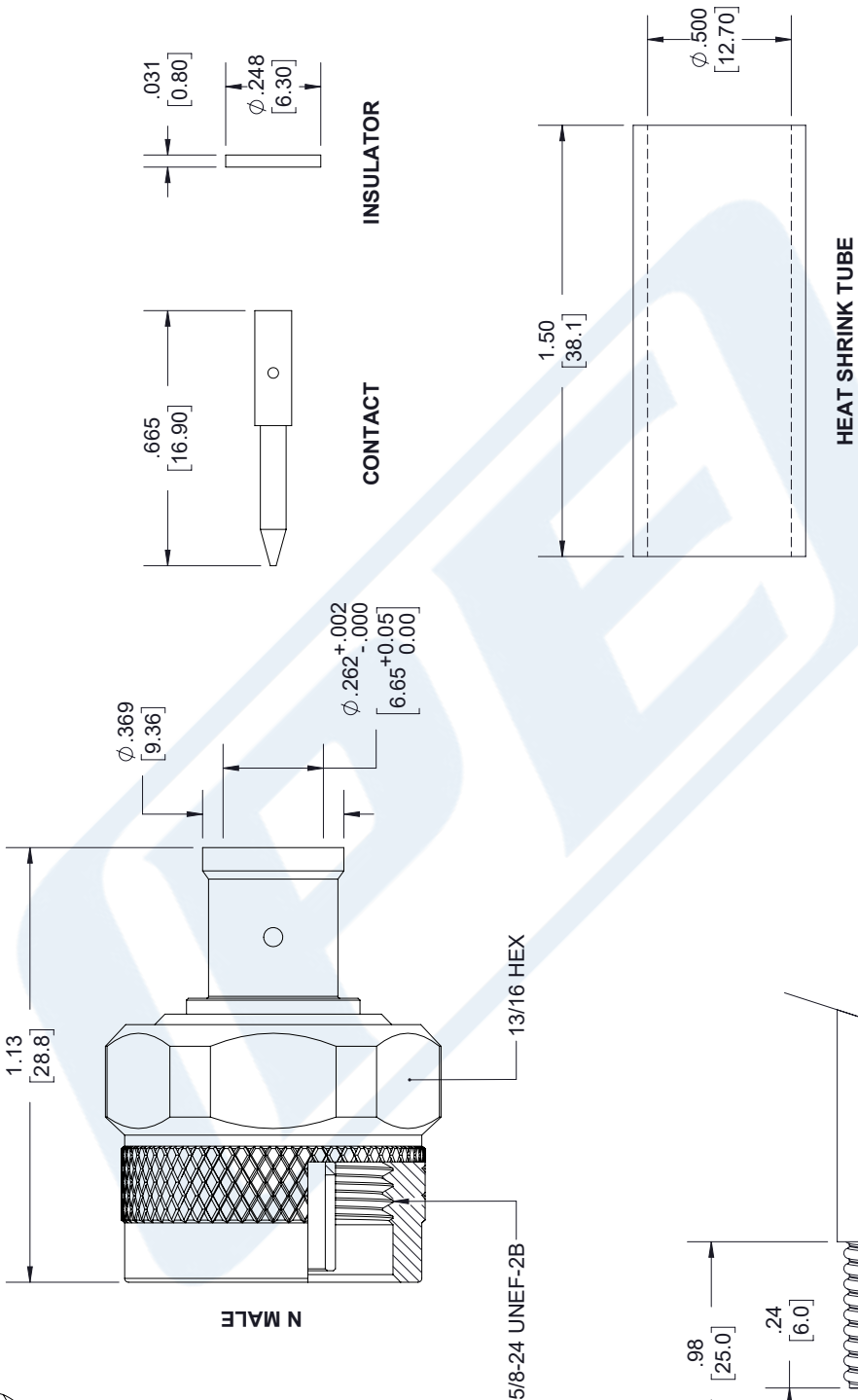
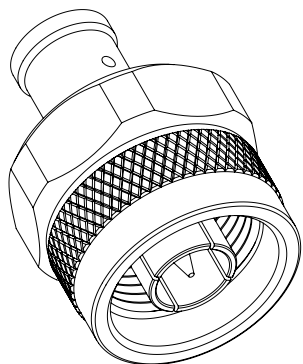
URL: <https://www.pasternack.com/n-male-spp-250-llpl-spo-250-connector-tc-250-nm-lp-p.aspx>

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	PCR TC-250-NM-LP	5/29/2020	S. ELLIS



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

TOLEANCES:
 .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.

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

PE PASTERNAK
 an INFINITI 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-250-NM-LP
 CAGE CODE DRAWN BY K.DANG
 SIZE A

REV A

- 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.



Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket

RF Cables Technical Data Sheet

PE-1/4SFHC

Configuration

- Low Loss Corrugated Cable
- 1 Shield(s)

Features

- Low Passive Intermodulation
- Solid copper outer conductor provides the highest possible RF shielding
- Excellent return loss performance
- Highly foamed dielectric provides low attenuation
- Superflexible helically corrugated copper outer conductor enables a small bending radius

Description

Our corrugated cables and Low PIM connector combinations result in cable assemblies with excellent Passive Intermodulation performance. Solid copper outer conductors provide the highest possible RF shielding. This Superflexible cable features excellent return loss performance. The highly foamed dielectric and optimized dimensions of these cables result in excellent low attenuation values. The Superflexible helically corrugated copper outer conductor allows for a small bending radius.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		20.4	GHz
Cutoff Frequency		25		GHz
Impedance		50		Ohms
Velocity of Propagation		82		%
Shielding Effectiveness	120			dB
Dielectric Withstanding Voltage (DC)			900	Vdc
Jacket Spark			2,000	Vrms
Inner Conductor DC Resistance			3.2	Ohms/1000ft
Outer Conductor DC Resistance			2.53	Ohms/1000ft
Nominal Capacitance		24.4 [80.05]		pF/ft [pF/m]
Nominal Inductance		0.059 [0.19]		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 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket PE-1/4SFHC](#)



Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket

RF Cables Technical Data Sheet

PE-1/4SFHC

Performance by Frequency Band

Description	F1	F2	F3	F4	F5	Units
Frequency	0.03	0.15	0.45	0.9	1.5	GHz
Attenuation, Typ	0.94	2.14	3.75	5.46	7.26	dB/100ft
	3.08	7.02	12.3	17.91	23.82	dB/100m
Input Power (CW), Max	2,090	924	520	360	278	Watts

Description	F6	F7	F8	F9	F10	Units
Frequency	1.8	2	2.2	2.5	3	GHz
Attenuation, Typ	8.02	8.52	8.99	9.67	10.73	dB/100ft
	26.31	27.95	29.49	31.73	35.2	dB/100m
Input Power (CW), Max	250	238	230	210	190	Watts

Mechanical Specifications

Diameter	0.303 in [7.7 mm]
Weight	0.048 lbs/ft [0.07 kg/m]
Number of Bends, Min	20
Min. Bend Radius (Installation)	0.5 in [12.7 mm]
Min. Bend Radius (Repeated)	1 in [25.4 mm]
Tensile Strength	79 lbs [35.83 kg]

Construction Specifications

Description	Material and Plating	Diameter
Inner Conductor	Copper Clad Aluminum, 1 Strand	0.074 in [1.88 mm]
Conductor Type	Solid	
Dielectric	PE (F)	0.187 in [4.75 mm]
First Shield	Helically Corrugated Copper Tube	0.25 in [6.35 mm]
Jacket	PE, Black	0.303 in [7.7 mm]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket PE-1/4SFHC](#)



Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket

RF Cables Technical Data Sheet

PE-1/4SFHC

Environmental Specifications

Temperature

Operating Range

-55 to +85 deg C

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

Plotted and Other Data

Notes:

Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket 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.

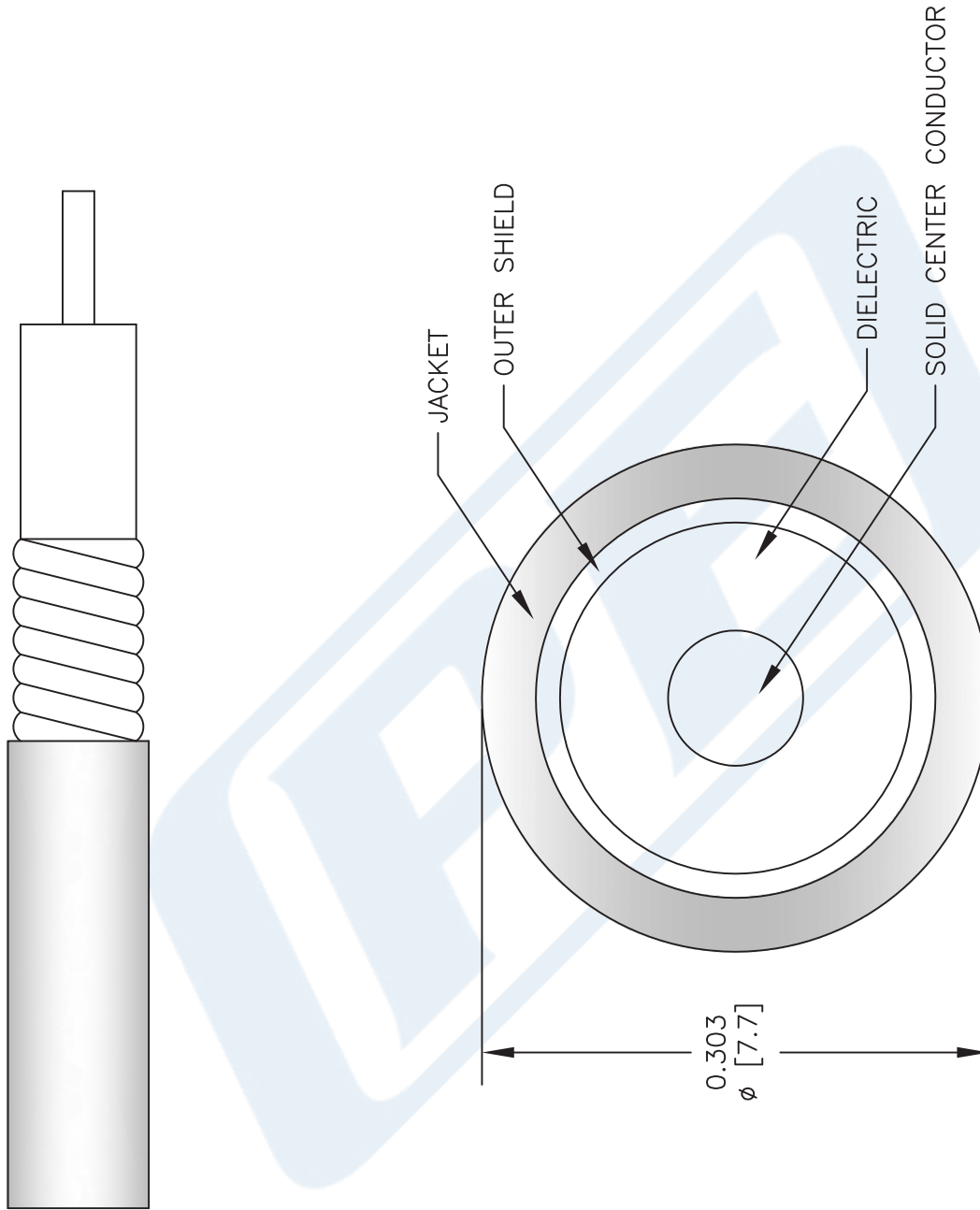
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket PE-1/4SFHC](#)

URL: <https://www.pasternack.com/50-ohm-low-loss-corrugated-1-4-superflexible-helical-coax-pe-1-4sfhc-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.

PE-1/4SFHC CAD Drawing

Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket



NOTES:
 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
 3. DIMENSIONS ARE IN INCHES [mm].

DWG TITLE
PE-1/4SFHC

FSCM NO. 53919

CAD FILE 092112

SCALE N/A

SIZE A

2233

PE PASTERNAK®
 Pasternack Enterprises, Inc.
 P.O. Box 16759 | Irvine | CA | 92623
Phone: (949) 261-1920 | **Fax:** (949) 261-7451
Website: www.pasternack.com | **E-Mail:** sales@pasternack.com