



7/16 DIN Male Right Angle Low PIM Connector Solder Attachment for SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible

RF Connectors Technical Data Sheet



TC-250-716M-RA-LP

Times Microwave Systems Connector Specification

Configuration

- 7/16 DIN Male Connector
- 50 Ohms
- Right Angle Body Geometry
- Connector Interface Types: SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible cable compatibility, PE-1/4SFHC
- Low PIM Design

Features

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.3:1
- PIM levels lower than -160 dBc
- Silver Plated Brass Contact
- 200 µin contact plating

Applications

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

Description

Times Microwave's TC-250-716M-RA-LP 7/16 DIN male right angle connector offered by Pasternack with solder/solder attachment for Times' SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible cable compatibility and PE-1/4SFH is part of our full line of RF components available for same-day shipping. Times Microwave's 7/16 DIN male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.3:1. The Times 7/16 DIN male connector also has low passive intermodulation of -160 dBc. Its right angle body geometry allows for easier connections in tight spaces.

Times Microwave's 7/16 DIN male right angle connector TC-250-716M-RA-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			1.3:1	
Insertion Loss			0.1	dB
Passive Intermodulation			-160	dBc
Operating Voltage (DC)			1,500	Vdc
Dielectric Withstanding Voltage (AC)			4,000	Vrms
Inner Conductor DC Resistance			0.4	mOhms
Outer Conductor DC Resistance			1.5	mOhms
Insulation Resistance	10,000			MOhms

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [7/16 DIN Male Right Angle Low PIM Connector Solder Attachment for SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible TC-250-716M-RA-LP](#)



7/16 DIN Male Right Angle Low PIM Connector Solder Attachment
for SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible

RF Connectors
Technical Data Sheet



TC-250-716M-RA-LP

Mechanical Specifications

Size	
Length	1.39 in [35.31 mm]
Width/Dia.	1.26 in [32.00 mm]
Height	1.26 in [32 mm]
Weight	0.1545 lbs [70.08 g]
Mating Cycles	500 Cycles
Mating Torque	221.23 in-lbs [25.00 Nm]
Cable Retention Force	200 lbs 90.72 kg

Material Specifications

Description	Material	Plating
Contact	Brass	Silver 200 µin
Insulation	PTFE	
Body	Brass	Tri-Metal 100 µin
Coupling Nut	Brass	Tri-Metal 100 µin
Gasket	Silicone Rubber	

Environmental Specifications

Temperature	
Operating Range	-40 to +125 deg C
Humidity	IP67
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

Environmental Specification Notes:
IEC 60068 55/125/21

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: [7/16 DIN Male Right Angle Low PIM Connector Solder Attachment for SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible TC-250-716M-RA-LP](#)



7/16 DIN Male Right Angle Low PIM Connector Solder Attachment for SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible

RF Connectors Technical Data Sheet



TC-250-716M-RA-LP

7/16 DIN Male Right Angle Low PIM Connector Solder Attachment for SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible 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.

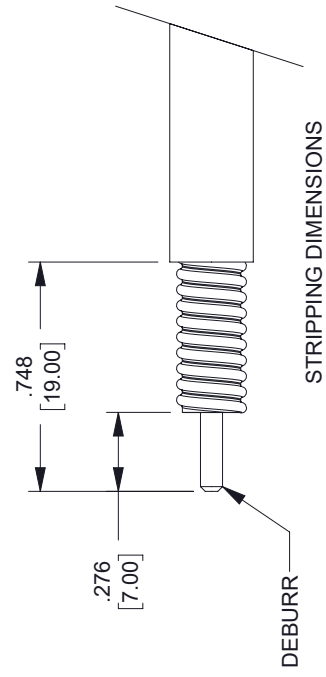
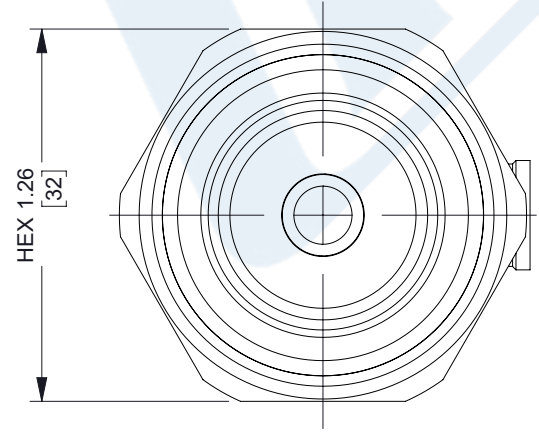
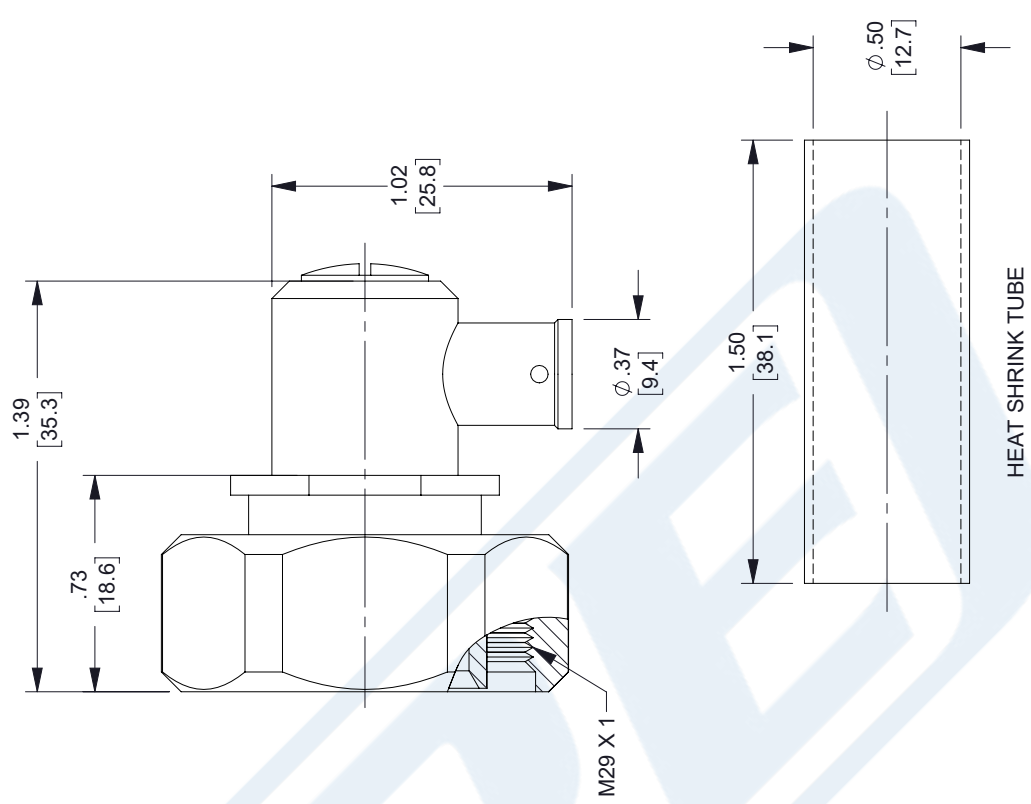
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [7/16 DIN Male Right Angle Low PIM Connector Solder Attachment for SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible TC-250-716M-RA-LP](https://www.pasternack.com/7-16-din-male-spp-250-llpl-connector-tc-250-716m-ra-lp-p.aspx)

URL: <https://www.pasternack.com/7-16-din-male-spp-250-llpl-connector-tc-250-716m-ra-lp-p.aspx>

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TIMES MICROWAVE SYSTEMS **TC-250-716M-RA-LP CAD Drawing**
 7/16 DIN Male Right Angle Low PIM Connector Solder Attachment for
 SPP-250-LLPL, SPF-250, SPO-250, 1/4 inch Superflexible

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	9/2/21	SRAUTUS



STRIPPING DIMENSIONS

HEAT SHRINK TUBE

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV A

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 E-mail: sales@pasternack.com

ITEM NO. TC-250-716M-RA-LP

SIZE A CAGE CODE 53919 DRAWN BY DMAY

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.

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

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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

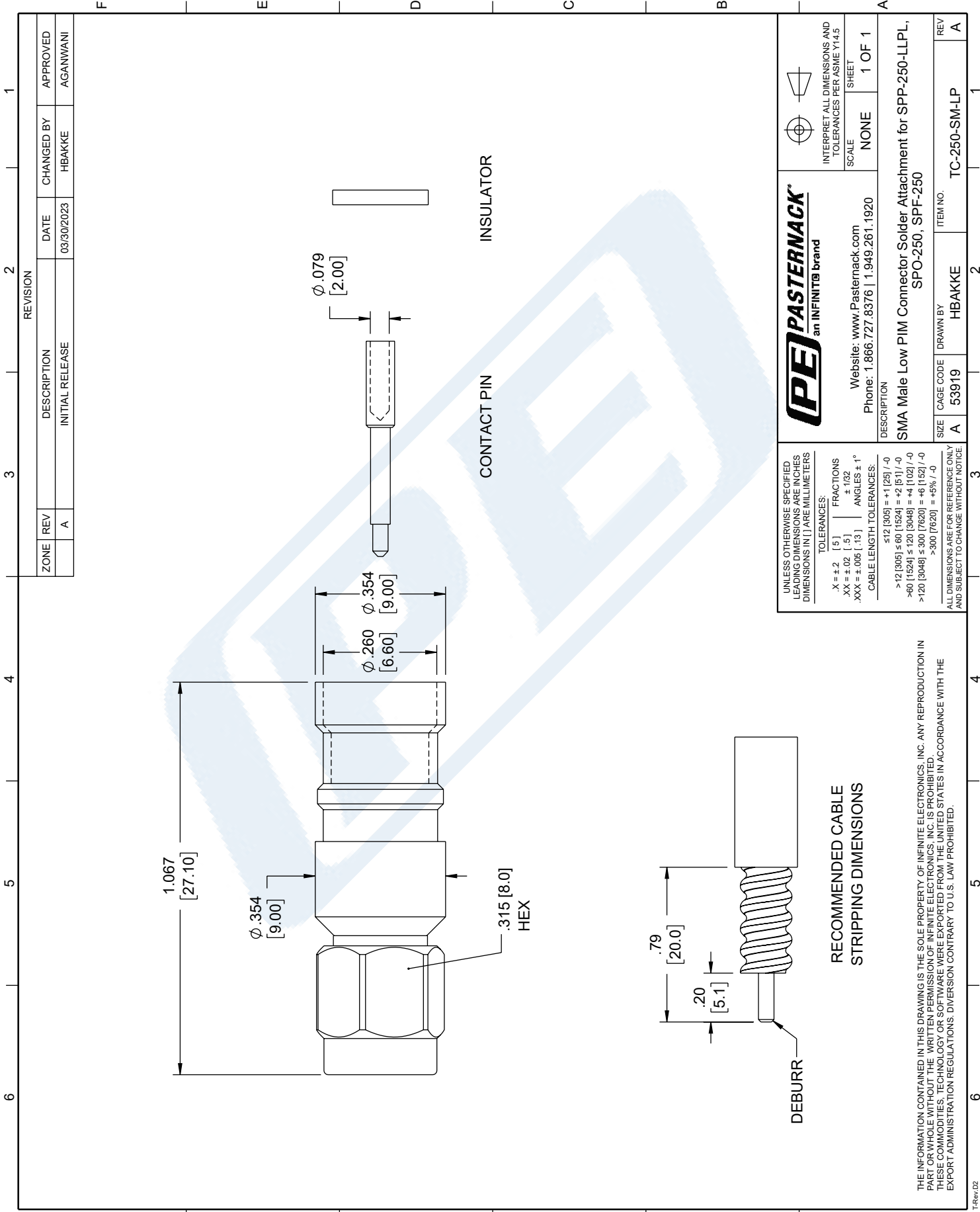
RF Connectors Technical Data Sheet

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)

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INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5
 SCALE NONE SHEET 1 OF 1

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

TOLERANCES:
 .X = ±.2 [5] | FRACTIONS ±.102
 .XX = ±.02 [.5] | ANGLES ± 1°
 .XXX = ±.005 [.13] | CABLE LENGTH TOLERANCES:
 ≤12 [305] = +1 [25] / -0
 >12 [305] ≤ 60 [1524] = +2 [51] / -0
 >60 [1524] ≤ 120 [3048] = +4 [102] / -0
 >120 [3048] ≤ 300 [7620] = +8 [152] / -0
 >300 [7620] = +5% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE

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

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	HBAKKE	TC-250-SM-LP

REV A



Low Loss SPO-250 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-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

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

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

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.

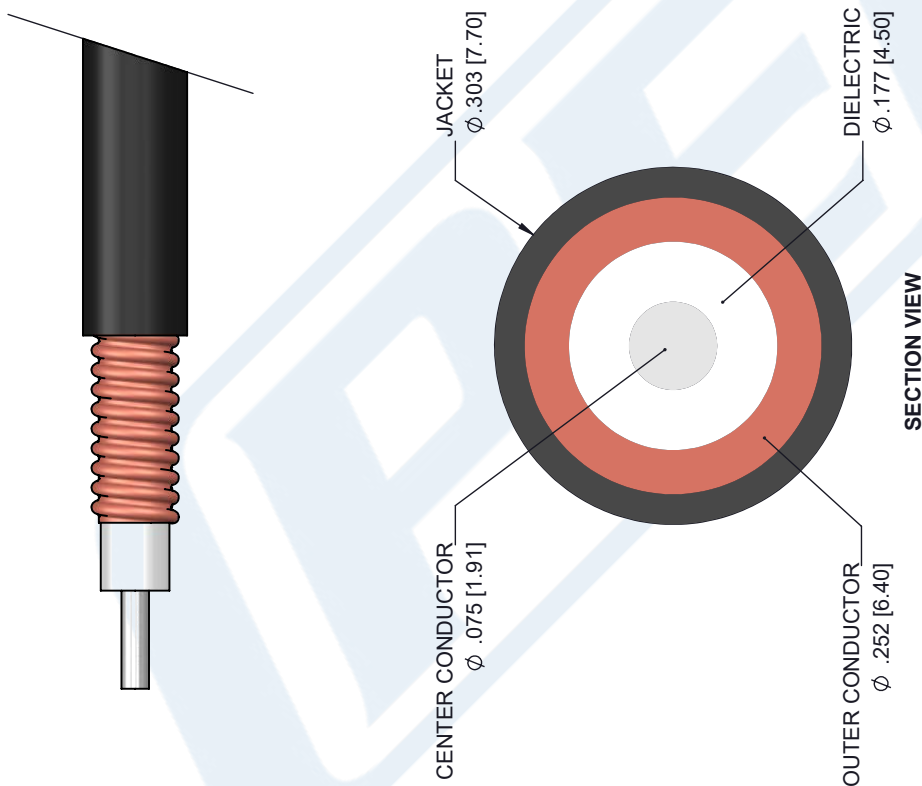
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low Loss SPO-250 Rated Corrugated Coax Cable with Black PE Jacket Superflexible Outdoor Rated SPO-250](#)

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

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TIMES MICROWAVE SYSTEMS **SPO-250 CAD Drawing**
 Low Loss SPO-250 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 \pm 2 [5.08] FRACTIONS
 XX \pm 01 [.25] +1/32
 XXX \pm .005 [.13] ANGLES \pm 1°

ALL DIMENSIONS SHOWN
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THIRD-ANGLE PROJECTION

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SHEET 1 OF 1
 SCALE N/A

CAGE NUMBER A 53919
 DRAWN BY K. DANG
 PART NUMBER SPO-250
 REV A

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