



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

RF Connectors
Technical Data Sheet



TC-250-SM-RA-LP

Times Microwave Systems Connector Specification

Configuration

- SMA Male Connector
- 50 Ohms
- Right Angle 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 1.3:1
- 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-SM-RA-LP SMA male right angle connector offered by Pasternack with solder/solder attachment for Times' SPP-250-LLPL, SPF-250, SPO-250, 1/4" Superflexible and PE-1/4SFHC 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 1.3:1. The Times SMA 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 SMA male right angle connector TC-250-SM-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 | | | 0.25 | dB |
| Passive Intermodulation | | | -160 | dBc |
| Dielectric Withstanding Voltage (AC) | | | 4,000 | Vrms |
| Inner Conductor DC Resistance | | | 3 | mOhms |
| Outer Conductor DC Resistance | | | 2.5 | 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: [SMA Male Right Angle Low PIM Connector Solder Attachment for SPP-250-LLPL, SPF-250, SPO-250, 1/4" Superflexible, PE-1/4SFHC TC-250-SM-RA-LP](#)



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RF Connectors Technical Data Sheet



TC-250-SM-RA-LP

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

Mechanical Specifications

| | |
|-----------------------|------------------------------------|
| Size | |
| Length | 0.99 in [25.15 mm] |
| Width/Dia. | 0.262 in [6.65 mm] |
| Height | 0.262 in [6.65 mm] |
| Weight | 0.045 lbs [20.41 g] |
| Mating Cycles | 500 Cycles |
| Mating Torque | 0 to 9.73 in-lbs [0.00 to 1.10 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 |

Environmental Specifications

| | |
|--------------------|--------------------------------------|
| Temperature | |
| Operating Range | -40 to +125 deg C |
| Shock | MIL-STD 202, Method 213, Condition I |
| Vibration | MIL-STD 202, Method 204, Condition D |
| Thermal Shock | MIL-STD 202, 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:

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RF Connectors
Technical Data Sheet

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

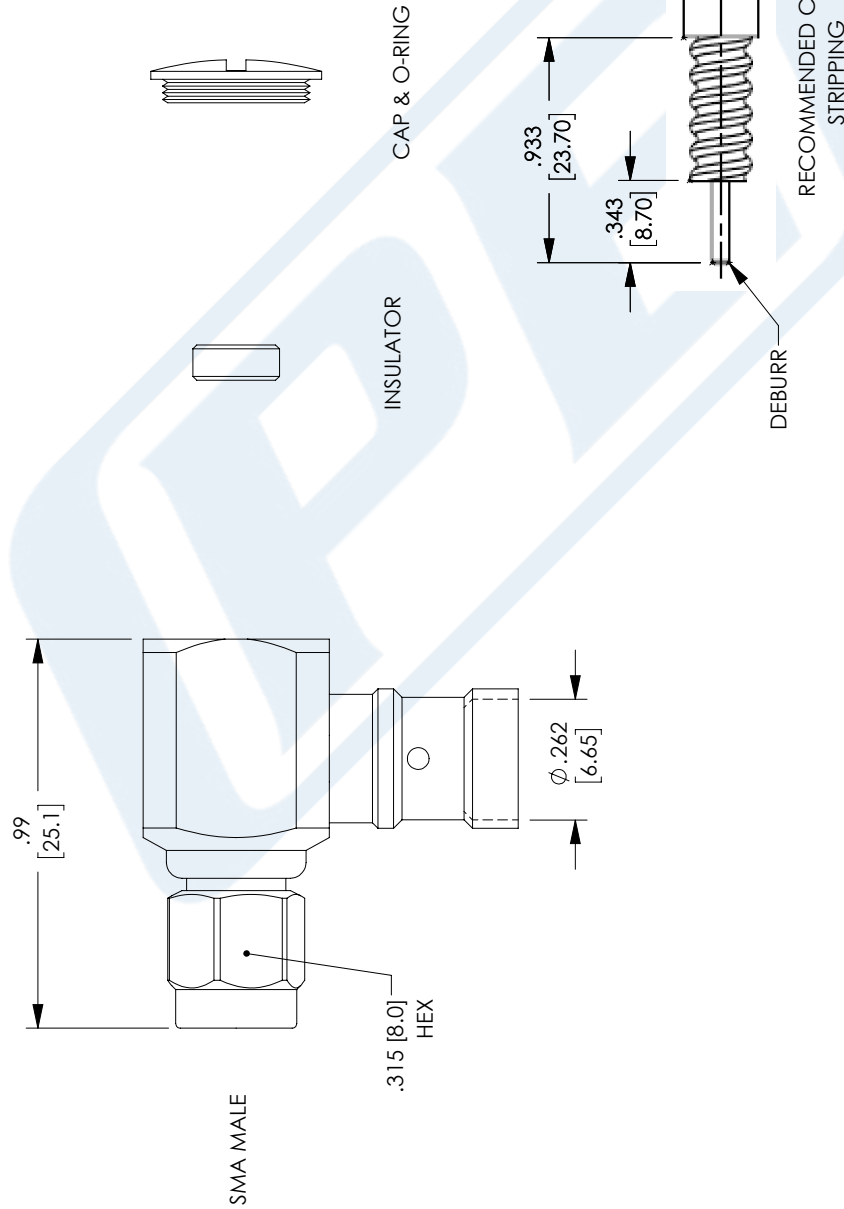
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TIMES MICROWAVE SYSTEMS **TC-250-SM-RA-LP CAD Drawing**
 SMA Male Right Angle Low PIM Connector Solder Attachment for SPP-
 250-LLPL, SPF-250, SPO-250, 1/4" Superflexible, PE-1/4SFHC

| REVISIONS | | | |
|-----------|-----------------|------------|----------|
| REV. | DESCRIPTION | DATE | APPROVED |
| A | INITIAL RELEASE | 03/11/2021 | SELLIS |



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

TOLERANCES:

| | | |
|--------------|-------|-------------|
| .X = ±.2 | [.08] | FRACTIONS |
| .XX = ±.02 | [.51] | ± 1/32 |
| .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%L / -0 |

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

PE PASTERNAK
an INFINITI brand

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 Fax: 1.949.261.7451
 Website: www.pasternack.com
 E-mail: sales@pasternack.com

ITEM NO. TC-250-SM-RA-LP

SIZE A CAGE CODE 53919 DRAWN BY DFRISIELLO REV A

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TC-250-SM-RA-LP

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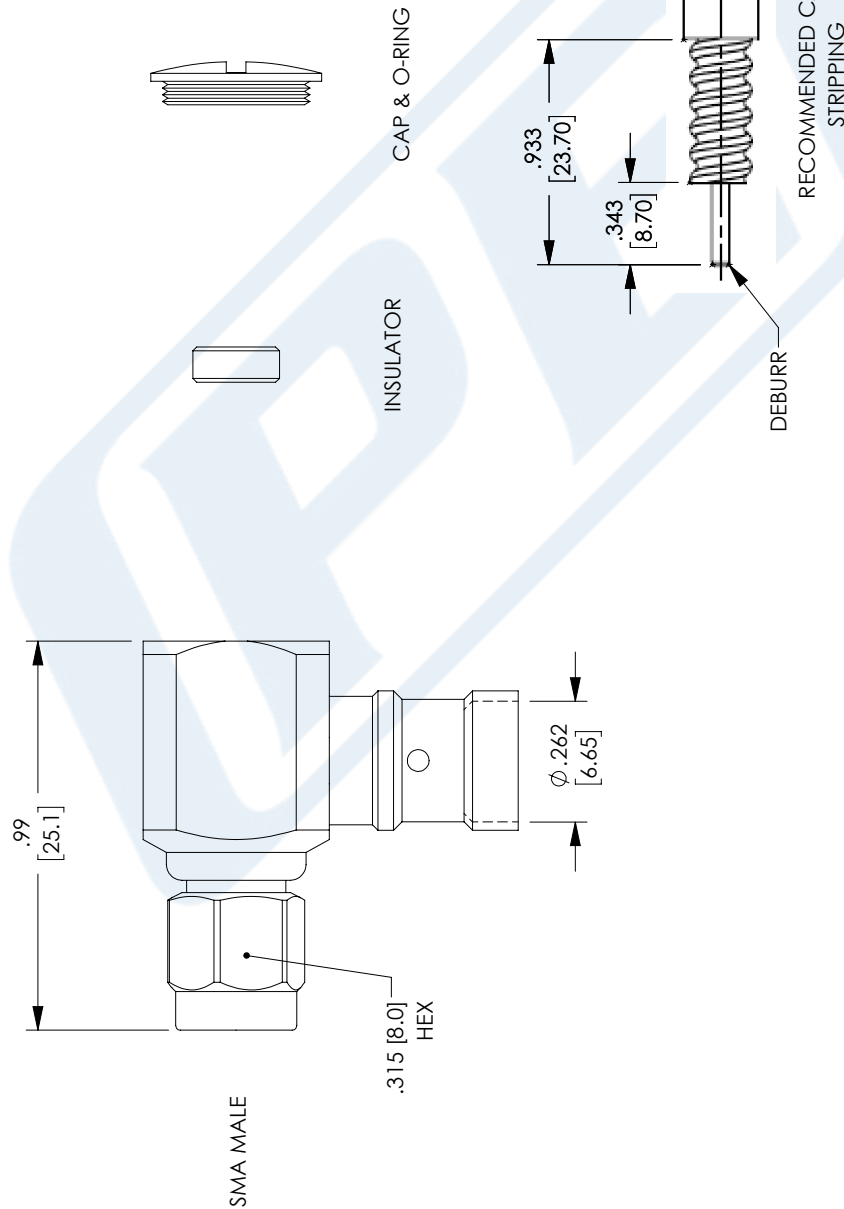
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SHEET 1 OF 1
SCALE N/A

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an INFINITI brand

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 Fax: 1.949.261.7451
 Website: www.pasternack.com
 E-mail: sales@pasternack.com

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

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| 300 [7620] < L | | = +5%L / -0 |

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SIZE [CAGE CODE] DRAWN BY ITEM NO.
 A 53919 DFRISIELLO TC-250-SM-RA-LP



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.

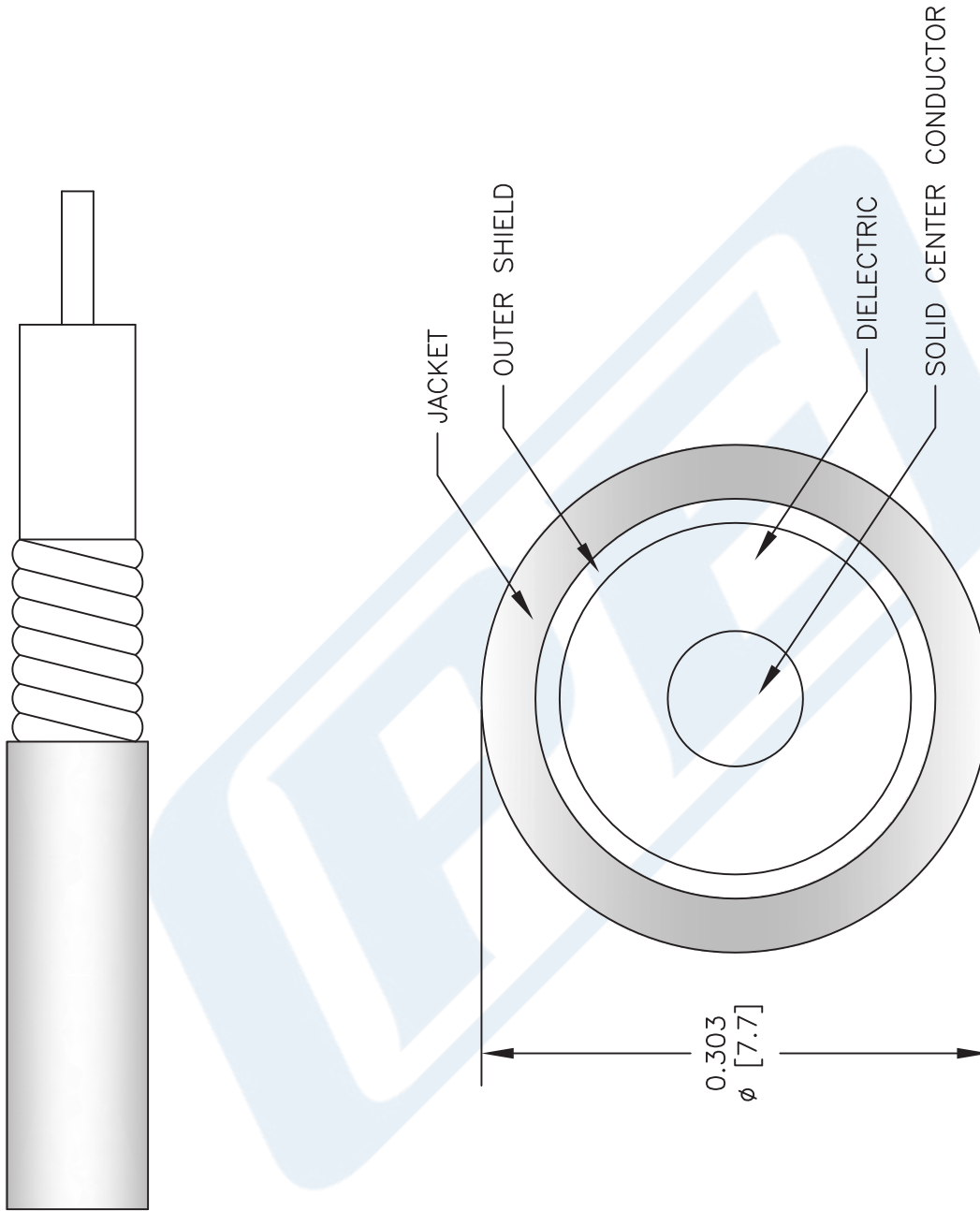
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URL: <https://www.pasternack.com/50-ohm-low-loss-corrugated-1-4-superflexible-helical-coax-pe-1-4sfhc-p.aspx>

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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.
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Phone: (949) 261-1920 | **Fax:** (949) 261-7451
Website: www.pasternack.com | **E-Mail:** sales@pasternack.com