



## SMP Female Right Angle to SMP Female Right Angle Cable Using RG178 Coax with 270 Deg. Clock

### RF Cable Assemblies Technical Data Sheet

**PE3C3870/PH270**

#### Configuration

- Connector 1: SMP Female Right Angle
- Connector 2: SMP Female Right Angle
- Cable Type: RG178

#### Features

- Max Frequency 3 GHz
- 70% Phase Velocity
- FEP Jacket

#### Applications

- General Purpose
- Laboratory Use

#### Description

Pasternack's PE3C3870/PH270 SMP female right angle to SMP female right angle cable using RG178 coax is part of our full line of RF components available for same-day shipping. Pasternack's flexible RF cable assemblies are ideal for applications where tight bends and flexure are required. This Pasternack SMP to SMP cable assembly has a female to female gender configuration with 50 ohm flexible RG178 coax. The PE3C3870/PH270 SMP female to SMP female cable assembly operates to 3 GHz. The right angle SMP interfaces on the RG178 cable allow for easier connections in tight spaces.

Custom versions of most RF cable assemblies can be built and shipped same day. Custom cable assembly lengths can be obtained by specifying the desired length on the web site at time of order or by contacting a sales representative. Other available RF cable assembly value added services include connector orientation or clocking, heat shrink booting and custom labeling. RF testing can also be performed to document the electrical performance of your cable assembly.

#### Electrical Specifications

| Description             | Minimum | Typical      | Maximum | Units        |
|-------------------------|---------|--------------|---------|--------------|
| Frequency Range         | DC      |              | 3       | GHz          |
| VSWR                    |         |              | 1.4:1   |              |
| Velocity of Propagation |         | 70           |         | %            |
| Capacitance             |         | 29.4 [96.46] |         | pF/ft [pF/m] |

#### Specifications by Frequency

| Description           | F1    | F2    | F3    | F4    | F5    | Units |
|-----------------------|-------|-------|-------|-------|-------|-------|
| Frequency             | 0.1   | 0.25  | 0.5   | 1     | 3     | GHz   |
| Insertion Loss (Typ.) | 0.138 | 0.208 | 0.305 | 0.444 | 0.784 | dB/ft |
|                       | 0.45  | 0.68  | 1     | 1.46  | 2.57  | dB/m  |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMP Female Right Angle to SMP Female Right Angle Cable Using RG178 Coax with 270 Deg. Clock PE3C3870/PH270](#)



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#### Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as 0.2 dB per connector.

#### Mechanical Specifications

##### Cable Assembly

##### Cable

|                                      |                            |
|--------------------------------------|----------------------------|
| Cable Type                           | RG178                      |
| Impedance                            | 50 Ohms                    |
| Inner Conductor Type                 | Stranded                   |
| Inner Conductor Material and Plating | Copper Clad Steel, Silver  |
| Dielectric Type                      | PTFE                       |
| Number of Shields                    | 1                          |
| Shield Layer 1                       | Silver Plated Copper Braid |
| Jacket Material                      | FEP, Tan                   |
| Jacket Diameter                      | 0.072 in [1.83 mm]         |

Repeated Minimum Bend Radius 0.4 in [10.16 mm]

##### Connectors

| Description                           | Connector 1            | Connector 2            |
|---------------------------------------|------------------------|------------------------|
| Type                                  | SMP Female Right Angle | SMP Female Right Angle |
| Specification                         | MIL-STD-348A           | MIL-STD-348A           |
| Impedance                             | 50 Ohms                | 50 Ohms                |
| Contact Material and Plating          | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Contact Plating Specification         | MIL-DTL-45204          | MIL-DTL-45204          |
| Dielectric Type                       | PTFE                   | PTFE                   |
| Outer Conductor Material and Plating  | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Outer Conductor Plating Specification | MIL-DTL-45204          | MIL-DTL-45204          |
| Body Material and Plating             | Brass, Gold            | Brass, Gold            |
| Body Plating Specification            | MIL-DTL-45204          | MIL-DTL-45204          |

#### Environmental Specifications

##### Temperature

|                 |                                             |
|-----------------|---------------------------------------------|
| Operating Range | -55 to +155 deg C                           |
| Humidity        | MIL-STD-202, Method 106 (except 7b omitted) |
| Shock           | MIL-STD-202, Method 213, Condition I        |
| Vibration       | MIL-STD-202, Method 204, Condition D        |
| Salt Fog        | MIL-STD-202, Method 101, Condition B        |

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Cable Using RG178 Coax with 270 Deg. Clock

## RF Cable Assemblies Technical Data Sheet

**PE3C3870/PH270**

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

### Plotted and Other Data

Notes:

### How to Order

Part Number Configuration:

**PE3C3870/PH270**

- **xx**

**uu**

Unit of Measure:  
cm = Centimeters  
<blank> = Inches  
Length  
Base Number

Example: PE3C3870/PH270-12 = 12 inches long cable  
PE3C3870/PH270-100cm = 100 cm long cable

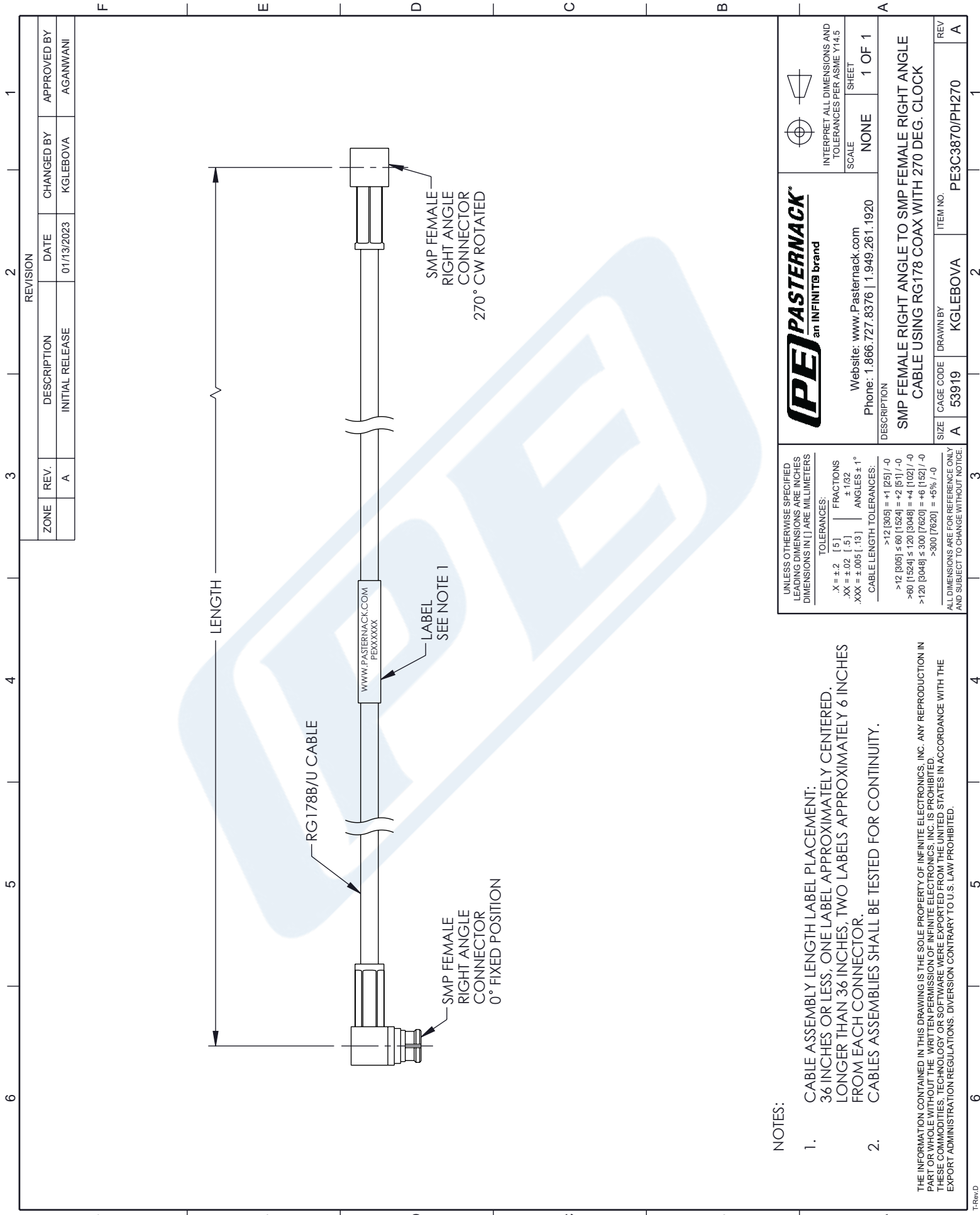
SMP Female Right Angle to SMP Female Right Angle Cable Using RG178 Coax with 270 Deg. Clock from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMP Female Right Angle to SMP Female Right Angle Cable Using RG178 Coax with 270 Deg. Clock PE3C3870/PH270](#)

URL: <https://www.pasternack.com/smp-female-right-angle-to-smp-female-cable-using-rg178-with-270-deg.-clock-pe3c3870-ph270-p.aspx>

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PE3C3870/PH270 CAD Drawing  
SMP Female Right Angle to SMP Female Right Angle  
Cable Using RG178 Coax with 270 Deg. Clock



NOTES:

1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT:  
36 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED.  
LONGER THAN 36 INCHES, TWO LABELS APPROXIMATELY 6 INCHES  
FROM EACH CONNECTOR.
2. CABLES ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.

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| <br><b>PASTERNAK</b><br>an INFINITE brand                                                                     | INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 |                |
|                                                                                                               | SCALE                                                  | SHEET          |
| Website: <a href="http://www.Pasternack.com">www.Pasternack.com</a><br>Phone: 1.866.727.8376   1.949.261.1920 | NONE                                                   | 1 OF 1         |
| DESCRIPTION                                                                                                   |                                                        |                |
| SMP FEMALE RIGHT ANGLE TO SMP FEMALE RIGHT ANGLE<br>CABLE USING RG178 COAX WITH 270 DEG. CLOCK                |                                                        |                |
| SIZE                                                                                                          | CAGE CODE                                              | ITEM NO.       |
| A                                                                                                             | 53919                                                  | PE3C3870/PH270 |
| DRAWN BY                                                                                                      |                                                        | REV            |
| KGLEBOVA                                                                                                      |                                                        | A              |

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

TOLERANCES:

|                    |             |
|--------------------|-------------|
| X = ±.2 [5]        | FRACTIONS   |
| .XX = ±.02 [.5]    | ±.1/32      |
| .XXX = ±.005 [.13] | ANGLES ± 1° |

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] = +6 [152] / -0 |
| >300 [7620] = +5% / -0                   |

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