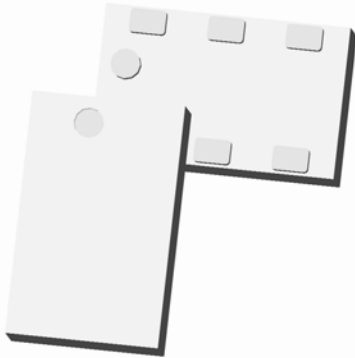


# Xinger®

## Ultra Low Profile 0805 Power Divider 50Ω to 50Ω



### Description

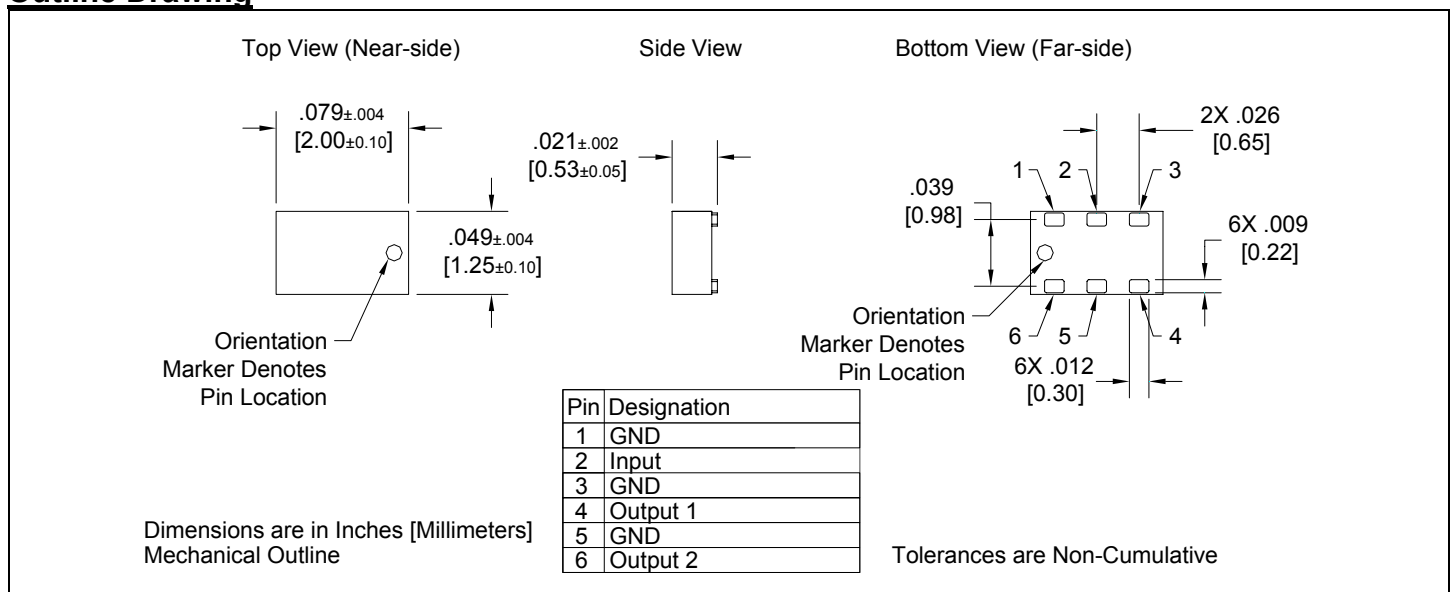
The PD6080J5050S2 is a low profile, sub-miniature Wilkinson power divider in an easy to use surface mount package. The PD6080J5050S2 is ideal for high volume manufacturing and delivers higher performances than traditional printed and lumped element solutions. The PD6080J5050S2 is matched to 50 Ω and has a height profile of 0.5 mm which is ideal for high level integrations in the following markets: RFID, fixed satellite, and mobile satellite. The PD6080J5050S2 does not include the resistive element and therefore, requires an external resistor for operation. The PD6080J5050S2 is available on tape and reel for high volume manufacturing pick and place.

### Detailed Electrical Specifications: Specifications subject to change without notice.

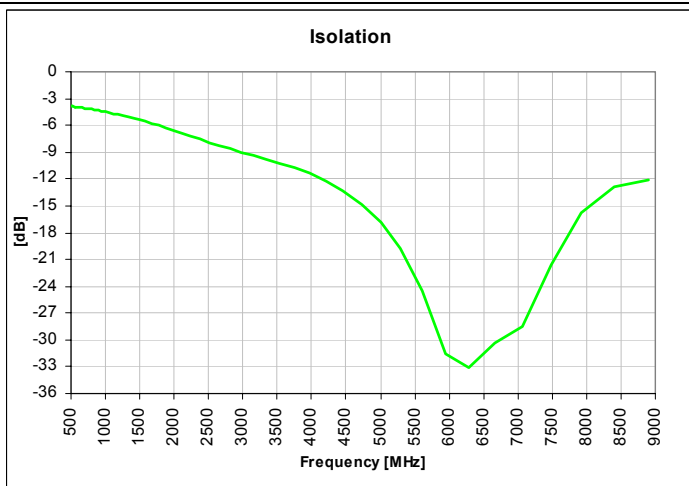
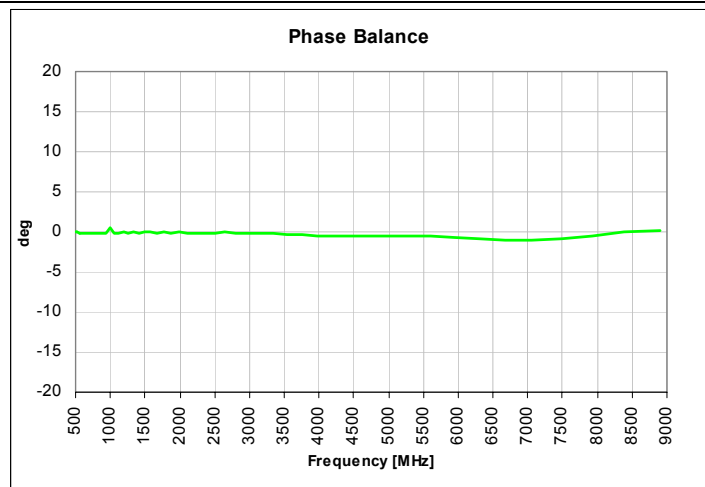
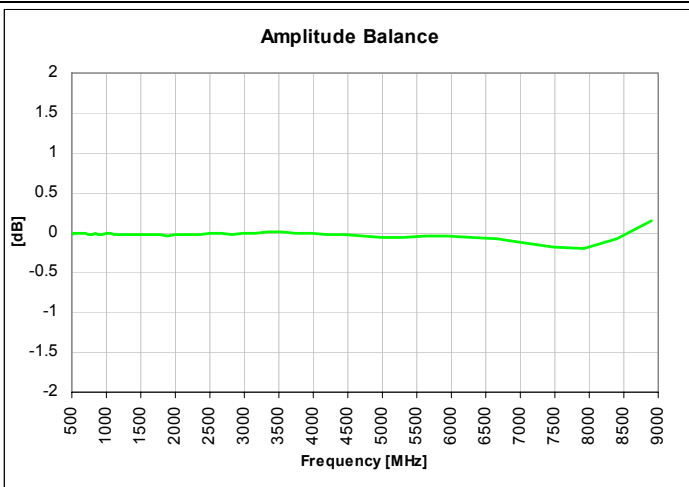
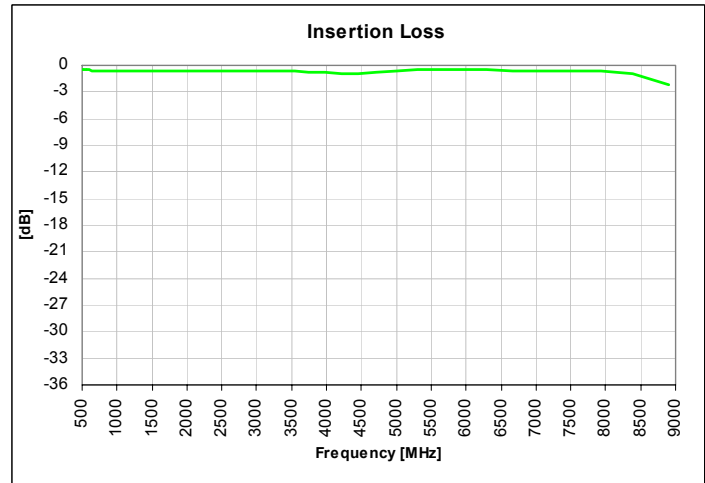
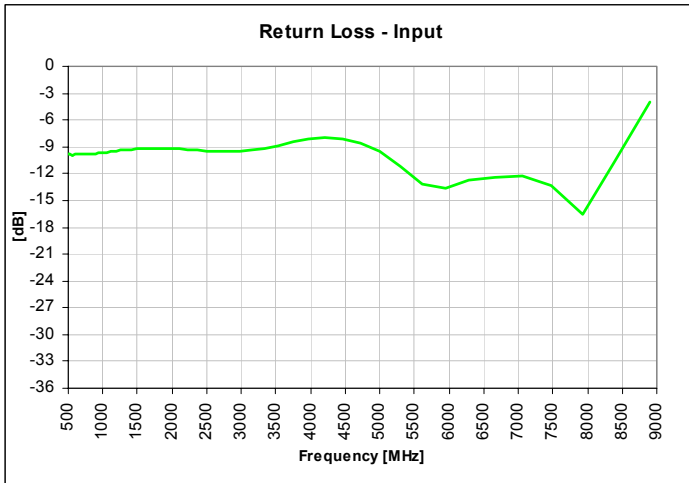
| Features:  | Parameter                | ROOM (25°C) |      |      | Unit    |
|--|--------------------------|-------------|------|------|---------|
|  |                          | Min.        | Typ. | Max  |         |
| <ul style="list-style-type: none"> <li>• 6000-8000 MHz</li> <li>• 15 dB Isolation (output ports)</li> <li>• Good Return Loss</li> <li>• 0.5mm Height Profile</li> <li>• 50Ω Input / 50Ω Outputs</li> <li>• Low Insertion Loss</li> <li>• Surface Mountable</li> <li>• Tape &amp; Reel</li> <li>• Non-conductive Surface</li> <li>• RoHS Compliant</li> </ul> | Frequency                | 6000        |      | 8000 | MHz     |
|  | Input Port Impedance     |             | 50   |      | Ω       |
|  | Output Port Impedance    |             | 50   |      | Ω       |
|  | Return Loss              | 9           | 12   |      | dB      |
|  | Insertion Loss*          |             | 0.6  | 0.9  | dB      |
|  | Amplitude Balance        |             | 0.2  | 0.5  | dB      |
|  | Phase Balance            |             | 2    | 5    | Degrees |
|  | Isolation (Output Ports) | 12          | 15   |      | dB      |
|  | Power Handling           |             |      | 2    | Watts   |
|  | Operating Temperature    | -55         |      | +85  | °C      |

\* Insertion Loss stated at room temperature (Insertion Loss is approximately 0.1 dB higher at +85 °C)

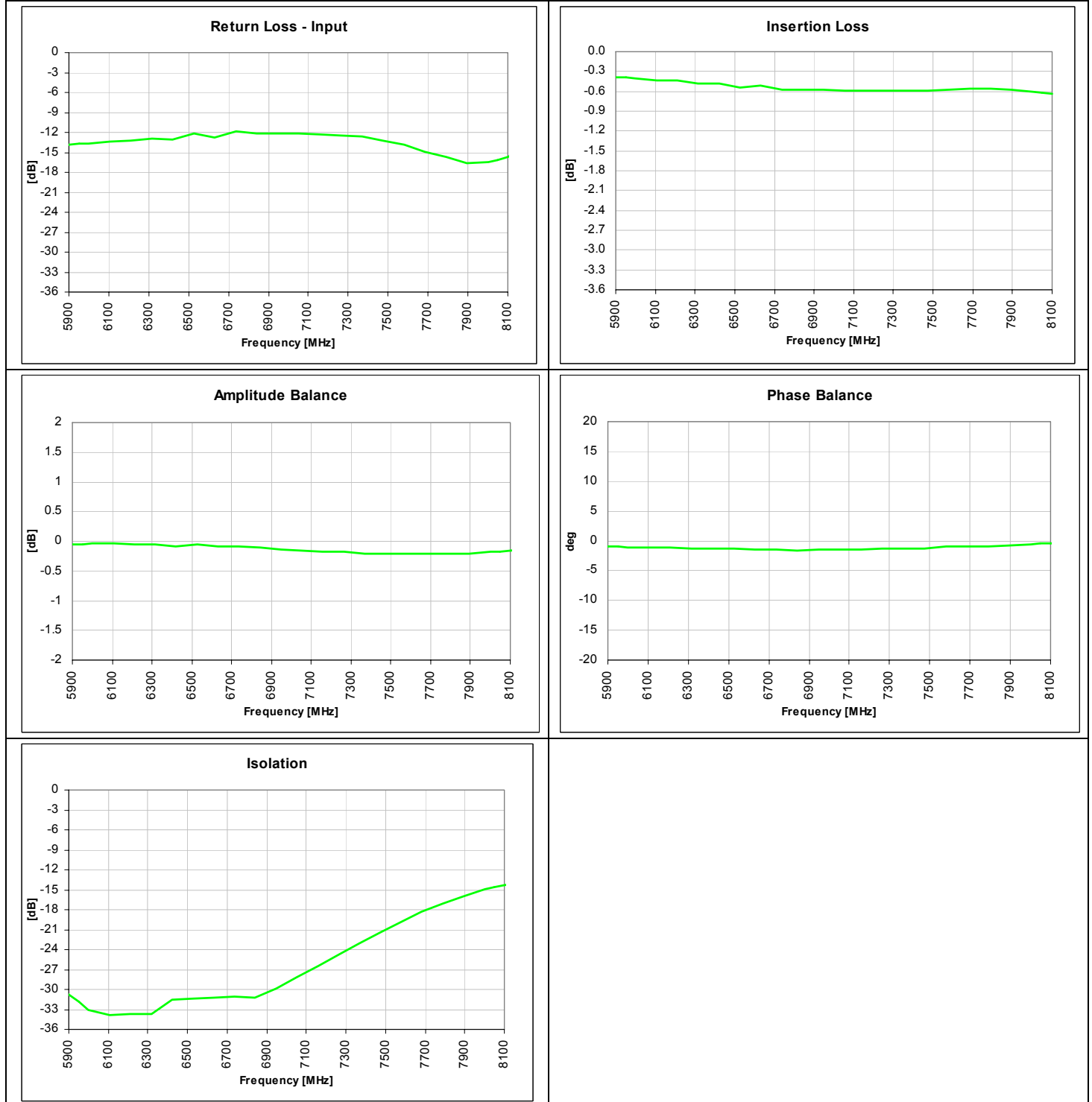
### Outline Drawing



## Typical Broadband Performance: 500 MHz. to 9.0 GHz.



### Typical Performance: 5900 MHz. to 8100 MHz.



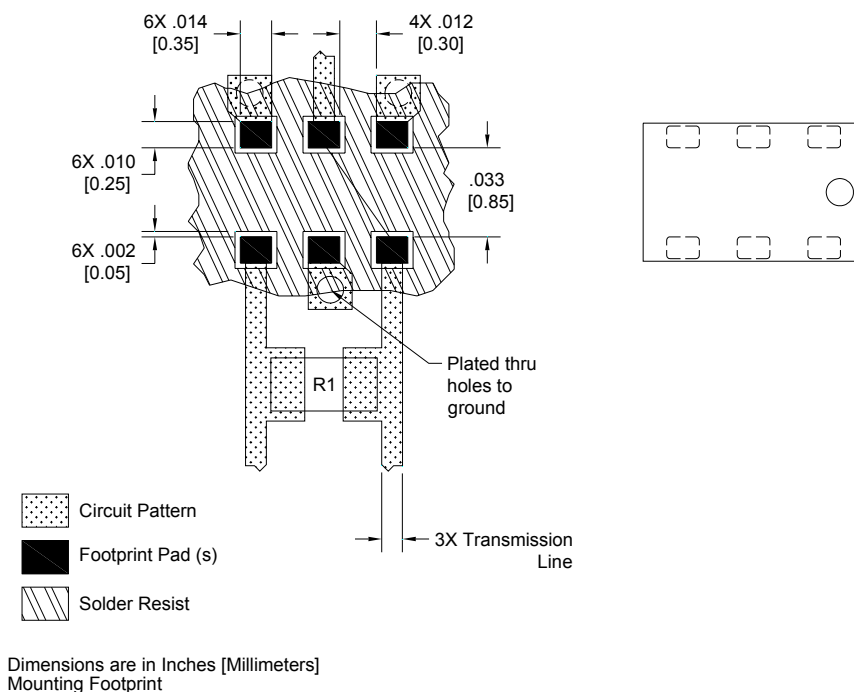
## Mounting Configuration:

In order for Xinger surface mount components to work optimally, the proper impedance transmission lines must be used to connect to the RF ports. If this condition is not satisfied, insertion loss, Isolation and VSWR may not meet published specifications.

An example of the PCB footprint used in the testing of these parts is shown below. In specific designs, the transmission line widths need to be adjusted to the unique dielectric coefficients and thicknesses as well as varying pick and place equipment tolerances. In addition, since the PD6080J5050S2 is a Wilkinson power divider, an external 0603 100Ω resistor must be mounted in locations R1 as shown in the Figure below.

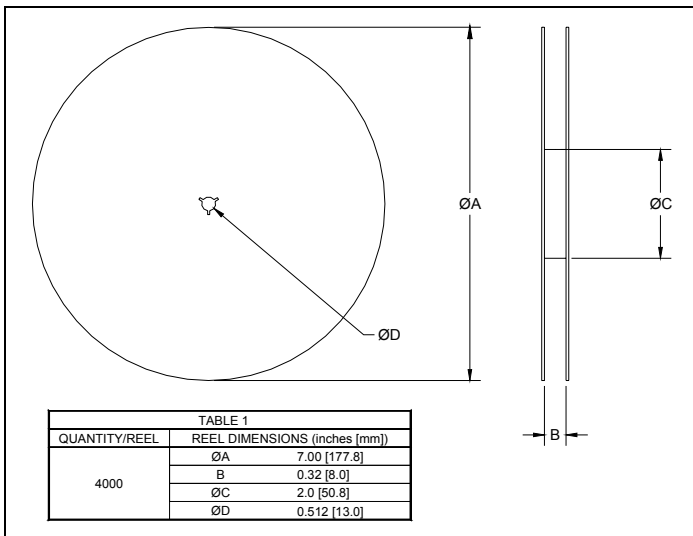
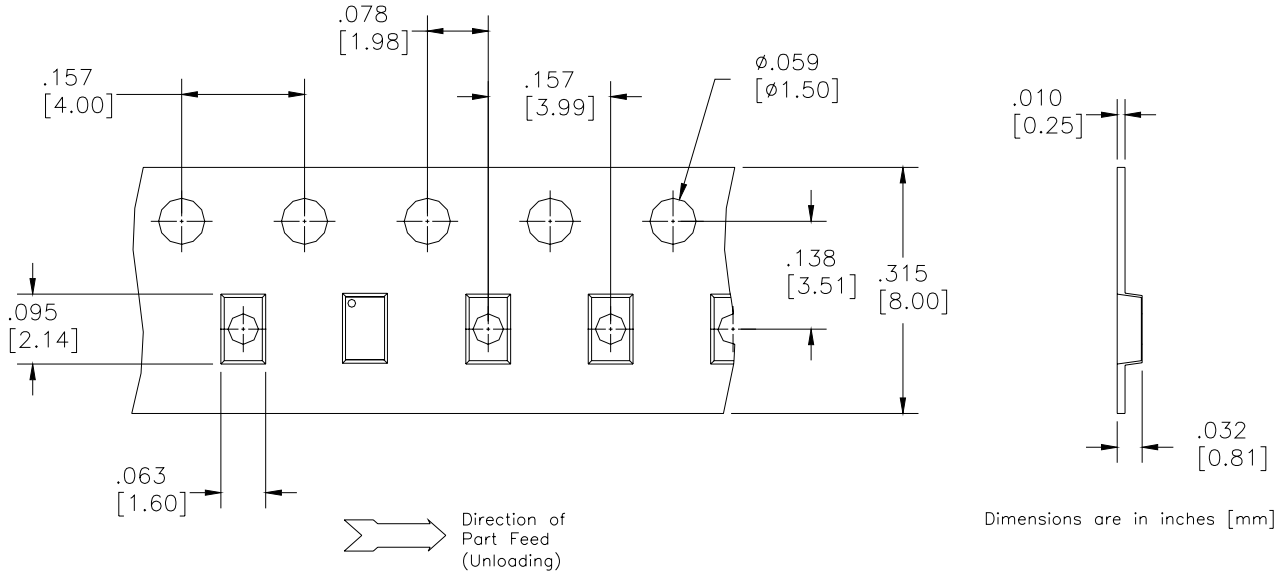
All of the Xinger components are constructed from ceramic filled PTFE composites which possess excellent electrical and mechanical stability having X and Y thermal coefficient of expansion (CTE) of 17 ppm/°C.

### Pad Footprint w/ 0603 Resistor Location



### Packaging and Ordering Information

Parts are available in reels and are packaged per EIA 481-2. Parts are oriented in tape and reel as shown below. Minimum order quantities are 4000 per reel. See Model Numbers below for further ordering information.



# BD 2425 J 50 100 A 00

| Function                   | Frequency              | Package Dimensions        | Unbalanced Impedance | Balanced Impedance + Coupling | Plating Finish | Codes |
|----------------------------|------------------------|---------------------------|----------------------|-------------------------------|----------------|-------|
| <b>B = Balun</b>           | 0110 = 100 – 1000 MHz  | <b>A = 150 x 150 mils</b> | 50 = 50 Ohm          | 25 = 25 Ω Balanced            | A = Gold       |       |
| <b>BD = Balun + DC</b>     | 0810 = 800 – 1000 MHz  | (4mm x 4mm)               | 75 = 75 Ohm          | 30 = 30 Ω Balanced            | P = Tin-Lead   |       |
| <b>F = Filter</b>          | 0922 = 950 – 2150 MHz  | <b>C = 120 x 120 mils</b> |                      | 50 = 50 Ω Balanced            |                |       |
| <b>FB = Filter / Balun</b> | 0826 = 800 – 6200 MHz  | (3mm x 3mm)               |                      | 75 = 75 Ω Balanced            |                |       |
| <b>C = 3dB Coupler</b>     | 1222 = 1200 – 2200 MHz | <b>E = 100 x 80 mils</b>  |                      | 100 = 100 Ω Balanced          |                |       |
| <b>DC = Directional</b>    | 1416 = 1400 – 1600 MHz | (2.5mm x 2mm)             |                      | 150 = 150 Ω Balanced          |                |       |
| <b>J = RF Jumper</b>       | 1722 = 1700 – 2200 MHz | <b>J = 80 x 50 mils</b>   |                      | 200 = 200 Ω Balanced          |                |       |
| <b>X = RF cross over</b>   | 2326 = 2300 – 2600 MHz | (2mm x 1.25mm)            |                      | 300 = 300 Ω Balanced          |                |       |
|                            | 2425 = 2400 – 2500 MHz | <b>L = 60 x 30 mils</b>   |                      | 400 = 400 Ω Balanced          |                |       |
|                            | 3150 = 3100 – 5000 MHz | (1.5mm x 0.75mm)          |                      | 03 = 3dB Hybrid               |                |       |
|                            | 3436 = 3400 – 3600 MHz | <b>N = 40 x 40 mils</b>   |                      | 10 = 10dB Directional         |                |       |
|                            | 4859 = 4800 – 5900MHz  | (1mm x 1mm)               |                      | 20 = 20dB Directional         |                |       |
|                            | 5153 = 5100 – 5300 MHz |                           |                      |                               |                |       |
|                            | 5159 = 5100 – 5900 MHz |                           |                      |                               |                |       |
|                            | 5759 = 5700 – 5900 MHz |                           |                      |                               |                |       |

USA/Canada: (315) 432-8909  
 Toll Free: (800) 411-6596  
 Europe: +44 2392-232392

Available on Tape and Reel for Pick and Place Manufacturing.



**Anaren**

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