



# Ultra Low Profile 0805 Power Divider Ultra Low $50\Omega$ to $50\Omega$



### **Description:**

The PD0922J5050S2HF is a low profile, sub-miniature Wilkinson power divider in an easy to use surface mount package. The PD0922J5050S2HF is ideal for high volume manufacturing and delivers higher performances than traditional printed and lumped element solutions. The PD0922J5050S2HF is matched to 50  $\Omega$  and has a height profile of 0.5 mm which is ideal for high level integrations in the following markets: DVB-S, DVB-H (USA), GSM, DCS, PCS, CDMA, 3G and GPS. The PD0922J5050S2HF does not include the resistive element and therefore, requires an external resistor for operation. The PD0922J5050S2HF is available on tape and reel for high volume manufacturing pick and place

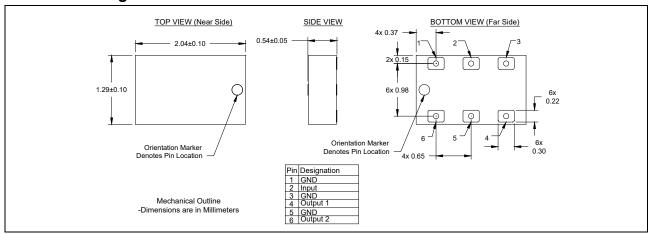
## **Detailed Electrical Specifications:**

Specifications subject to change without notice.

		ROOM (25°C)			
Features:	Parameter	Min.	Тур.	Max	Unit
• 950-2150 MHz	Frequency	950		2150	MHz
<ul><li>10dB Isolation (output ports)</li><li>High Return Loss</li></ul>	Input Port Impedance		50		Ω
0.5mm Height Profile	Output Port Impedance		50		Ω
• 50Ω Input / 50Ω Outputs	Return Loss	10.4	12		dB
Low Insertion Loss	Insertion Loss*		0.5	0.8	dB
Surface Mountable	Amplitude Balance		0.1	0.3	dB
Tape & Reel     Name and destine Confess	Phase Balance		1	3	Degrees
<ul><li>Non-conductive Surface</li><li>RoHS Compliant</li></ul>	Isolation (Output Ports)	9	10		dB
<ul> <li>External resistor required</li> <li>Halogen Free</li> </ul>	Power Handling@85°C @105°C			2 1.2	Watts
, and the second	Operating Temperature	-55		+140	°C

<sup>\*</sup> Insertion Loss stated at room temperature (Insertion Loss is approximately 0.1 dB higher at +85 °C) Outline Drawing

#### **Outline Drawing:**

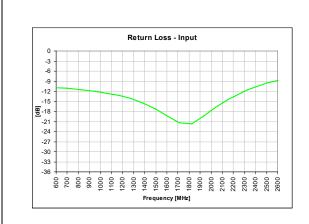




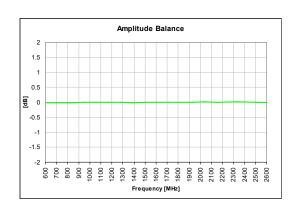
Typical Broadband Performance: 500 MHz. to 6.0 GHz. Return Loss - Input Insertion Loss -3 -3 -6 -6 -9 -9 -12 -12 -15 -15 <del>g</del>-18 **멸** -18 -21 -21 -24 -24 -27 -27 -30 -30 -33 -33 -36 -36 3000 500 1000 1500 5000 5500 1000 1500 3000 3500 4000 4500 **Amplitude Balance** Phase Balance 20 15 5 0.5 [dB] 0 0 -0.5 -5 -10 -1.5 -15 -20 1500 3000 3500 200 3000 3500 5500 Isolation -3 -6 -12 -15 <u>=</u>-18 --24 -27 -30 -33 -36 500 1000 1500 3500 4000 4500 5000 5500



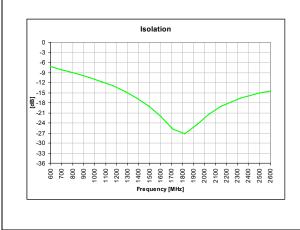
Typical Performance: 600 MHz. to 2600 MHz.











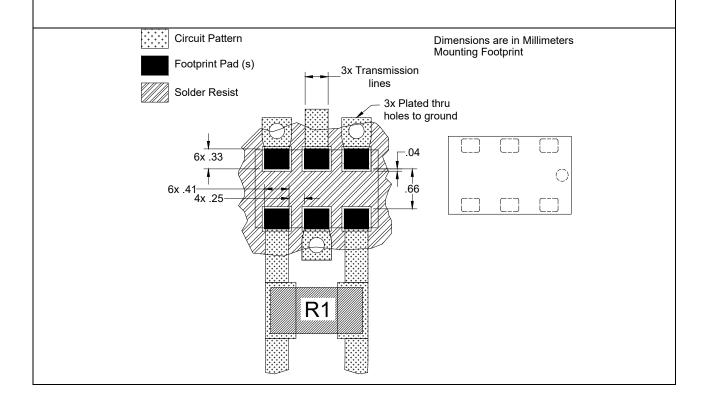


## **Mounting Configuration:**

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 PD0922J5050S2HF is a Wilkinson power divider, an external  $0603\ 100\Omega$  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/oC.





## **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.

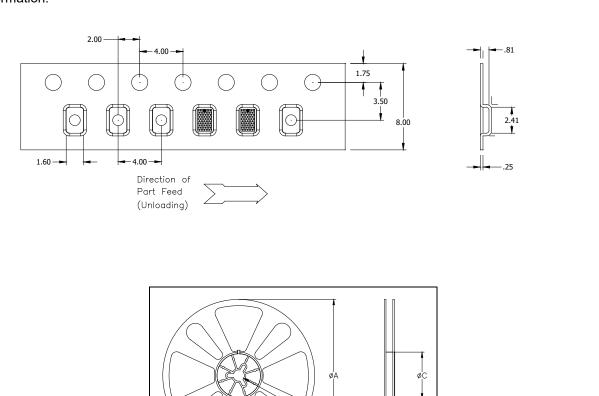


TABLE 1							
QUANTITY/REEL	REEL DIMENSIONS mn						
	ØΑ	177.80					
4000	В	8.00					
	øС	50.80					
	ØD	13.00					
•							

Contact us:

rf&s\_support@ttm.com