



Electro-Photonics LLC

Corporate Overview and Product Offerings

WWW.ELECTRO-PHOTONICS.COM

Electro-Photonics LLC

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Capabilities

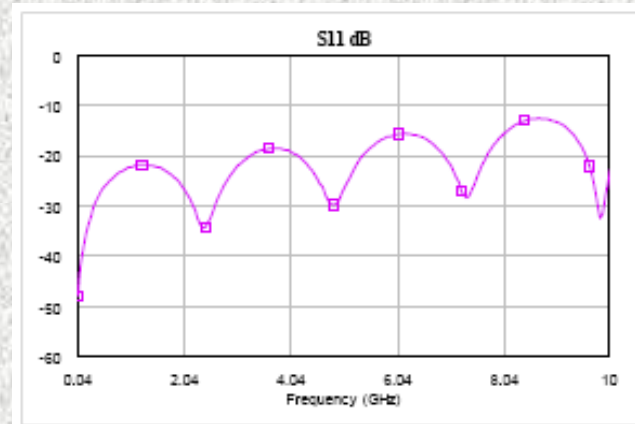
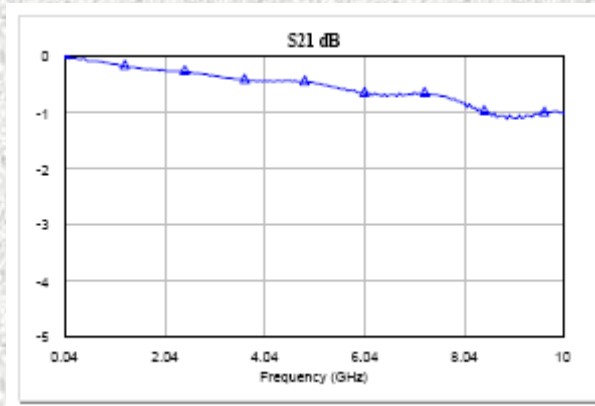
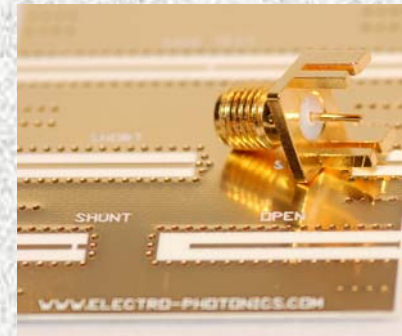
- Extensive design experience in:
 - RF/Microwave circuits and sub-systems
 - Antennas
 - Fiber-Optics
- Evaluation boards for passive and active components
- RF package design for high speed applications up to 50GHz
- Custom RF fixtures up to 20GHz
- Build-to-print thick and thin film circuits on various ceramic materials (Alumina, BeO, AlN, and others)
- Die attach and hybrid assembly in a 1000 ppm clean room
- Prototype to high volume capabilities
- High frequency testing and characterization
- Single or multiple element antennas
- Thick-film, thin-film, LTCC, HTCC processes

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New Products

0402 Evaluation Board

- Unique test board for any 0402 chip component
- Short, open, and thru-line for quick de-embedding
- Optimized RF launches to 10GHz
- Rogers 4350B high frequency board material
- 1dB of Insertion loss up to 10GHz

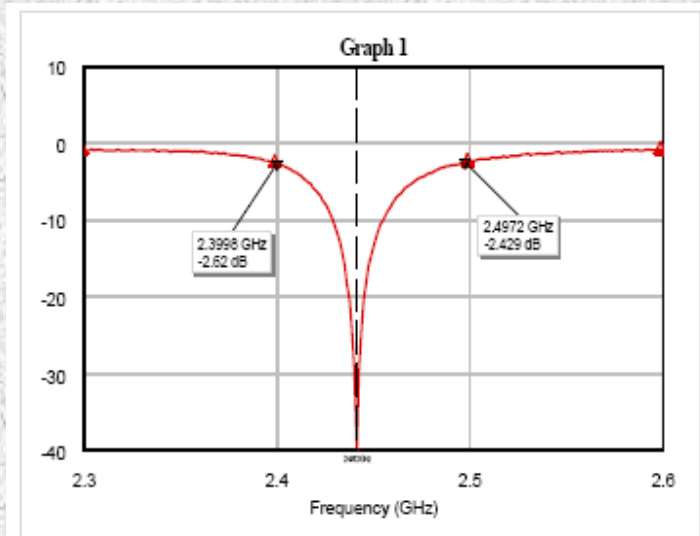


2.4GHz Antenna Evaluation Board

- Patch antenna optimized for MIMO applications
- Taconic RF35a2 material for exceptional performance
- Optimized RF launch

Electrical Specifications

Parameter	Specification	Units
Frequency Range (3 dB points)	2.403 to 2.488	GHz
Gain	5.4	dBi
VSWR	1.2:1	
Polarization	Linear/Vertical	
FBR (Front to back ratio)	25.8	dB
Horizontal/ Vertical	28	dB
Impedance	50	Ohms
Substrate Material	Taconic RF35 <ul style="list-style-type: none">• .060 thickness• 2 ounce copper• Er = 3.5	
HPBW	TBD <ul style="list-style-type: none">• Horizontal• Vertical	degrees
Power Handling (CW)	TBD	Watts
Temperature	-40 to 85	Degree Celsius
Connector	SMA Female	



Return Loss Vs. Frequency

MMIC Carrier for On-Wafer Probing

- Integrated probing pads (for 150um probes):
 - Reduces assembly time
 - CPWG to microstrip transition optimized to 40GHz 10mil 99.9%
 - Alumina thin-film substrate (or softboard)
- Scalable design that can be applied to various MMICs
- Prototype to high volume quantities



MMIC Carrier with Integrated Probing Pads

