Ironwood ELECTRONICS

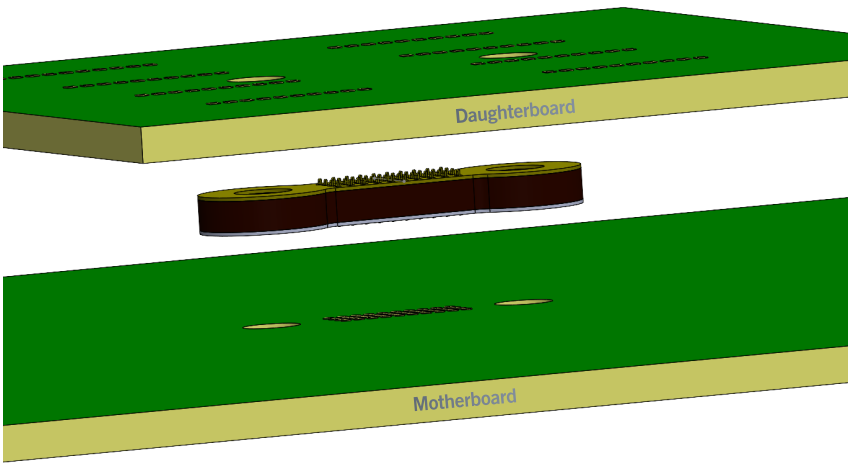
Board-to-Board Connectors for High Speed Applications

Connectors using spring pin contact technology provide up to 50GHz signal speed in a smallest footprint for prototype and production applications. These rugged interconnects utilize our laser-and-laminate process for rapid development and short lead-times, without expensive hard tooling. Connectors support pitches from 0.4mm to 1.27mm.

FEATURES AND BENEFITS

Shortest Contact	Highest bandwidth applications - 50GHz
Dual Spring Contact	Low contact resistance - 20mOhms
Laminated Substrate	No internal hardware - small footprint allows to be placed in location where conventional molded connectors obstruct
Laser Cut Substrate	Precise contact location - 25 micron positional tolerance
Soft Tool	Configurable stack height and location

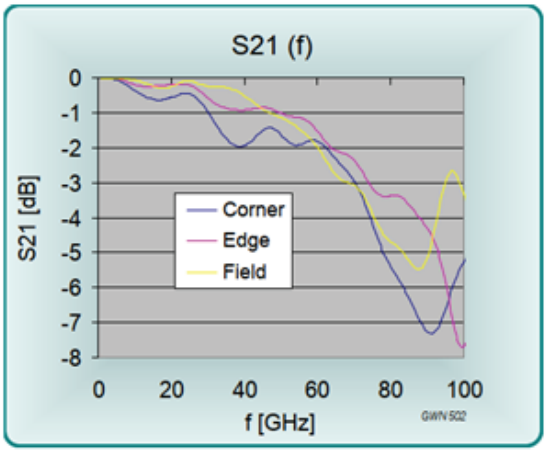
3D MODEL



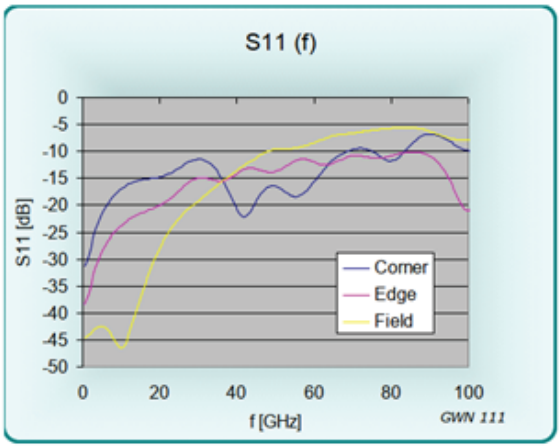
SPECIFICATIONS

Mechanical	
Force per contact	8 grams to 30 grams
Life cycles	>50 K
Contact length (@test)	1.0 mm to 6.0 mm
Electrical	
Insertion loss S21@-1dB	up to 50 GHz
Return loss S11@-15dB	up to 50 GHz
Self inductance	0.28 nH
Mutual inductance	0.08 nH
Mutual capacitance	0.02 pF
Impedance	55 Ohms
Time delay	6.6 ps
Current carrying capacity	1.8 A
Contact resistance	20 mOhms
Material	
Operating temperature	-55°C to +180°C
Housing	Laminated Polyimide (Cirlex®)
Contact	BeCu Plunger with SS spring

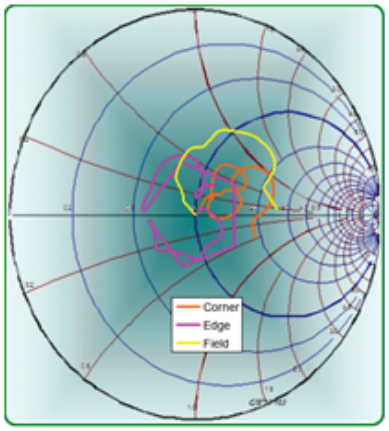
PERFORMANCE



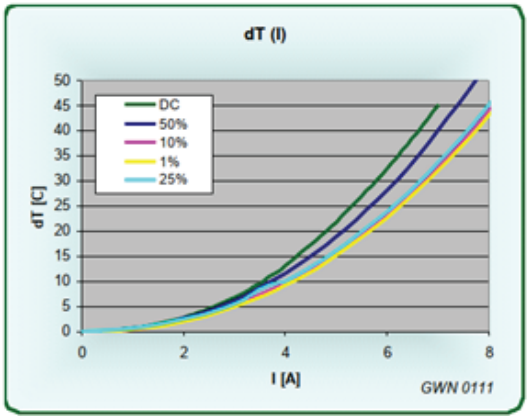
Insertion loss S21



Return loss S11



Smith Chart for the thru measurement into a 50 Ohm probe



Temperature rise as a function of drive current