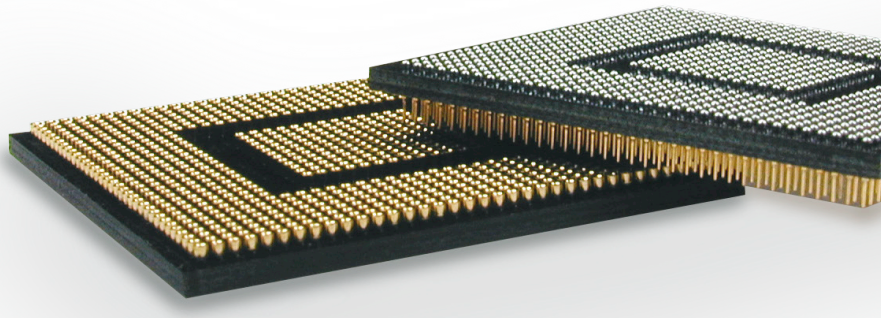
Ironwood ELECTRONICS

ME Giga-snaP™ BGA SMT Adapters

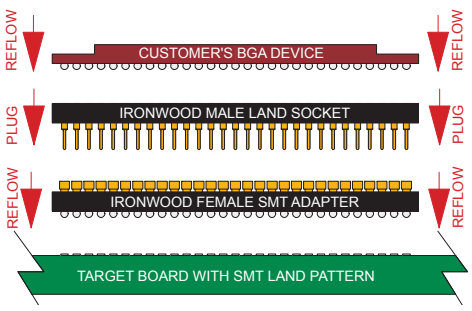


Through a combination of advance material engineering and a proprietary manufacturing process, ME Giga-snaP™ adapters provide the highest performance available in an SMT male/female adapter. The 100% sealed and stress-free process produces the flattest design possible, with absolutely no solder wicking, for strong and void-free solder joints.

FEATURES AND BENEFITS

100% sealed	Absolutely "zero" solder wicking - pins are sealed all the way to the solder joint, similar to BGA device
Stress Free	Adapter remains flat during reflow
Excellent Solderability	High quality solder joints with exceptional pull strength - verified thru extensive solder reflow testing & destructive pull testing
Matched CTE to BGA substrate	No warping after reflow
Short Contact	High bandwidth applications - 3.6GHz
Gold Plated Clips & Terminals	Low contact resistance ≤ 15mΩ
Chip Size Footprint	Easy to place inductors, capacitors, resistors, etc. for tuning & increasing bandwidth. Ideal for IC prototype & system testing & field upgradeable system designs
Low Insertion/Extraction Force	Easy operation to plug & remove module system
No Hard Tooling	Adapters are machined to order for shortest possible lead-time without expensive tooling

Application



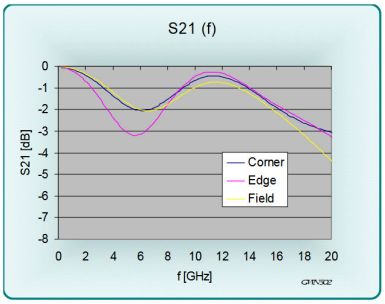
Capabilities

Access to BGA Pads for Test & Interconnection
Pin Counts from 36 to 1936
Available Pitches from 1.27, 1, 0.8mm
Connection via Gold-Plated Terminals for harsh environments
Soldered using conventional BGA method
Tape & Reel packaging

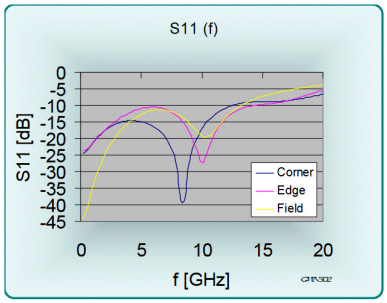
SPECIFICATIONS

Material Specification	
Terminals	Material: Brass Alloy Plating : 10µ" Gold over 100µ" Nickel (min.)
Receptacles	Shell Material: Brass Alloy 360 1/2 Hard Plating: 10µ" Gold over 100µ" Nickel (min.) Contacts Material: Beryllium Copper Alloy 172, HT Plating: Gold 0.1 µm (min.) over Nickel 1.27 µm (min.)
Solder Ball	Eutectic 63Sn/37Pb or Lead Free SAC305 Coplanarity: ≤ 150µm
Insulator	FR4/G10, FR5
Mechanical Specification	
Insertion Force	≤ 0.12N Initial insertion force (0.2mm diameter pin) ≤ 0.2N Initial insertion force (0.254mm diameter pin)
Extraction Force	≤ 0.12N Extraction force (0.2mm diameter pin) ≤ 0.2N Extraction force (0.254mm diameter pin)
Contact-durability	> 100 cycles
Operating Temperature	-55°C - 125°C
Electrical Specification	
Current per contact	1A@85°C
Contact-Resistance	≤ 15mΩ
Isolation-Resistance between contacts	10x109Ω @500V
Frequency	3.6GHz @-1dB
Self Inductance	2.4nH
Mutual Inductance	0.4nH
Capacitance	67 pF

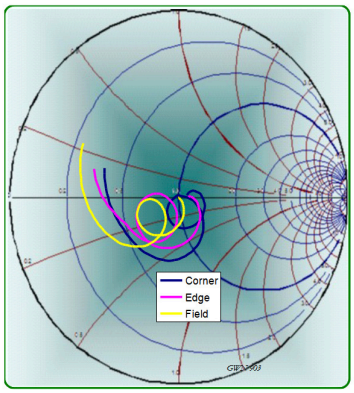
PERFORMANCE



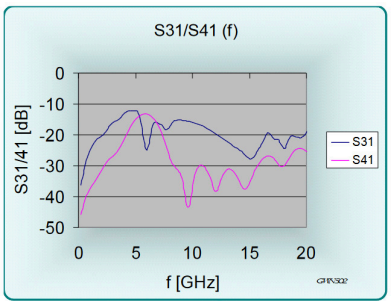
Insertion loss S21



Return loss S11



Smith chart for the thru measurement into a 50 Ohm probe



Crosstalk as a function of frequency