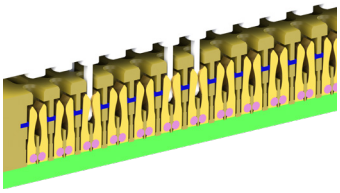
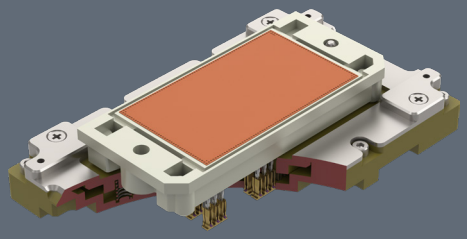
Ironwood ELECTRONICS



Insulated Gate Bipolar Transistor

IGBT Test Solutions

Power Module IGBT are used in a wide range of products for efficient switch and power conversion. IGBT's are used for electric vehicles, industrial motor drives, renewable energy systems, home appliances, trains and high power industrial equipment. Ironwood offers IGBT test sockets utilizing the Phantom or Ampire contact pins. The Phantom offers a very low inductance for fast switching and Ampire addresses PCB warpage that keeps the contact pin firmly in the PCB during test.



Insulated Gate Bipolar Transistor IGBT

Phantom G2

Mechanical Specifications	
Allowable Lead Travel (mm)	3.75 (adjustable depends on project requirement)
Pin Height (mm)	5.10
Contact Type	Rigid
Maximum Lead Offset Permissible (mm)	≤ 0.2
Number of Insertion - Housing	≥ 5 million
Number of Insertion - Pin	≥ 300k ~ 500k
Number of Insertion - Elastomer	≥ 100k ~ 400k
Operating Temperature (°C)	-45 to 155
Socket Material	Torlon®5030 or equivalent
Pin Material	BeCu-Ni-Au

Electrical Specifications	
Self Inductance (nH)	2.17
Mutual Inductance (nH)	0.45 (Based on 3.20P)
Ground Capacitance (pF)	0.23
Mutual Capacitance (pF)	0.09 (based on 3.20P)
Contact Resistance (mΩ)	≤ 30
Current Carrying Capacity (A)	17.5@100%

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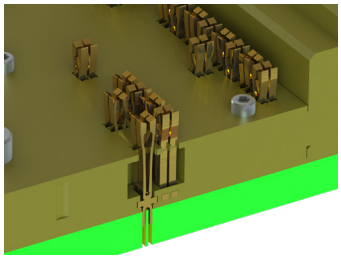
IGBT Test Solutions



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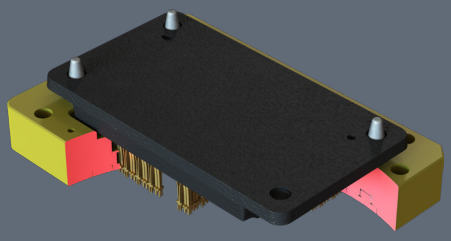

Insulated Gate Bipolar Transistor IGBT

Ampire

Mechanical Specifications		
Allowable Vertical Lead Travel (mm)	3.70 (adjustable depends on project requirement)	
Pin Height (mm)	14.60	
Contact Type	Cantilever	
Maximum Lead Offset Permissible (mm)	≤ 0.5	
Number of Insertion - Housing	≥ 2 million	
Number of insertion - Pin by Device Lead Offset	± 0.20 mm	~300k
	± 0.30 mm	~100k
	± 0.40 mm	~75k
	± 0.50 mm	~50k
Operating Temperature (°C)	-60 to 180	
Socket Material	Torlon®5030 or equivalent	
Pin Material	BeCu-Ni-Au	
Electrical Specifications		
Inductance (nH)	5.05	
Mutual Inductance (nH)	2.33 (based on 1.3P)	
Ground Capacitance (pF)	0.56	
Mutual Capacitance (pF)	0.73 (based on 1.3P)	
Contact Resistance (mΩ)	≤ 70	
Current Carrying Capacity (A)	12.2@100%	