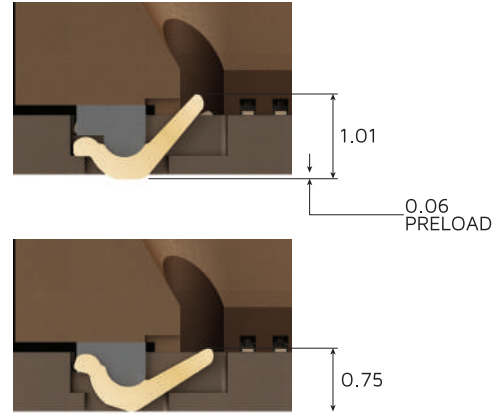
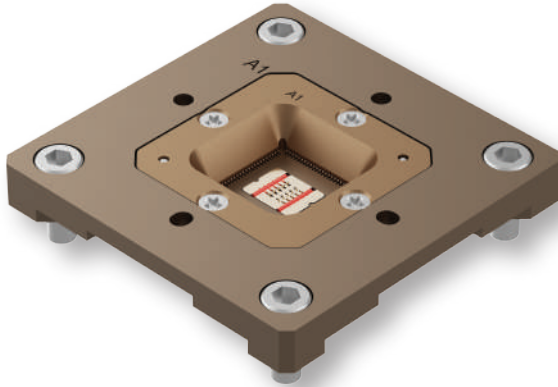


# Joule 20 Test Socket

*Redundant Scrubbing Contact for Peripheral Test*



Smiths Interconnect's Joule 20 test socket provides best-in-class electrical and mechanical performance in testing peripheral ICs for the most demanding Analog, RF and Automotive applications.

The innovative socket design allows for disassembly of housing without removing from the PCB during cleaning or repairing, which results in higher production throughput and reduced down time.

Joule 20's redundant contact technology provides repeated reliable DUT contact whether Matte Tin or NiPdAu, without damage to the PCB.

Smiths Interconnect's capabilities cover design validation, RF measurements and custom simulations, including test capability in Outgoing Quality Assurance.

## Features and Benefits

- Drop in socket, will match existing PCB Socket footprints
- Long contact life, up to 500K insertions
- Extremely short signal path provides high bandwidth up to 20Ghz
- Optimized contact shape ensures no PCB pad damage
- Tri-Temp Socket designed for (-40 °C to +125 °C)
- Increased test throughput and reduced test set-up time
- Solid contact structure for optimal DC performance

## End Product Markets



# Technical Characteristics

## Mechanical Properties

- Typical Application: QFN
- Pitches Accommodated:  $\geq 0.3\text{mm}$
- Contact Compressed Height: 0.75mm
- Contact Compliance: 0.24-0.26mm
- Contact Force: 40-45 Grams
- Contact Tip Coplanarity: 0.05mm
- Contact Wiping length:  $< 0.12\text{mm}$
- Operating Temperature:  $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- Socket Material: Polyimide
- Contact Life: Contacts = 500K+
- Elastomers Life:  $> 300\text{K@ambient}$ ,  $> 250\text{K @ } 125^{\circ}\text{C}$ ,  $250\text{K @ } -40^{\circ}\text{C}$
- Socket Housing = 3000K+

## Electrical Properties

- Contact Resistance:  $< 30 \text{ mOhms @ } 500\text{K}$
- Current Carrying Capacity: 8 Amps
- Insertion Loss (GSG): 20 GHz @ -1dB
- Return Loss (GSG): 20 GHz @ -10dB

## Electrical Performance - GSG Pattern

