Ironwood ELECTRONICS

# QFN35

## High-performance 0.35 mm+ engineering test socket for QFN and DFN style packaged devices

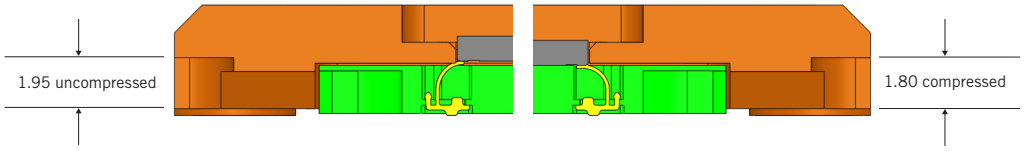
Ironwood Electronics QFN35 test sockets are designed for testing today's high performance QFN and DFN packages. For development, characterization, at speed burn-in, and low volume production manual testing.

## FEATURES AND BENEFITS

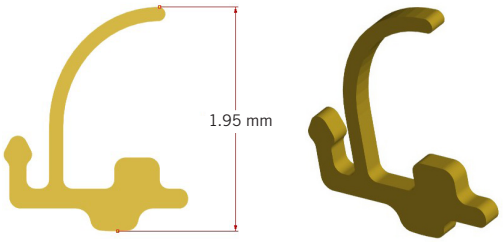
| | |
|---|---|
| Signal performance | Miniature stamped contacts provide extremely short signal path |
| Oxide-cutting wipe action | The QFN35 contact wipes the package pad, cutting through solder oxides |
| Near-device decoupling | Small footprints, with large underside frame decoupling pockets designed to standard dimensioned packages, allow for near-device placement of passive components |
| Reduced ground inductance | Multiple compliant ground contacts reduce ground inductance and provide a thermal path through the PCB. A solid ground block can be incorporated for further product enhancements |
| Replaceable contact sets | Sockets with replaceable contact sets offer a significant cost savings vs. the purchase of a new socket |

## METHODOLOGY

**Contact Height**



## CONTACTS




## SOCKET SPECIFICATIONS

Featuring a 0.35mm+ pitch, the QFN35 test sockets have been designed to the JEDEC STD. MO-220 and are available for all standard family members from 3mm to 12mm. Custom designs are also available. The QFN35 test sockets feature a unique contact design that provides outstanding electronic signal fidelity to meet the requirements of today's demanding analog, linear, RF, Bluetooth and telecommunication applications. Additionally, each of these test sockets has been designed to minimize valuable PCB real estate, enabling very close decoupling component placement. Standard cover options include a hinged or clip-on with custom covers available by request.

## ELECTRICAL SPECIFICATIONS

| P2A configuration | 0.4 mm pitch | 0.5 mm pitch* |
|---|---|---|
| GSG Loop inductance | 1.03 nH | 1.23 nH |
| Self inductance | 0.800 nH | 0.936 nH |
| Mutual inductance | 0.086 nH | 0.085 nH |
| Capacitance (GSG - Signal pin to Return) | 0.234 pF | 0.213 pF |
| Mutual capacitance | 0.016 pF | 0.014 pF |
| S21 Insertion loss (GSG) | -1 dB @ 17.4 GHz | -1 dB @ 11.0 GHz |
| S11 Return loss (GSG) | -20 dB @ 3.5 GHz | -20 dB @ 3.0 GHz |
| S41 Crosstalk (GSSG)** | -20 dB @ 7.6 GHz | -20 dB @ 4.8 GHz |
| Impedance | 66.3 Ω | 76 Ω |
| Time delay | 14.3 ps | 15.2 ps |
| Current Carrying Capacity (GSG) | 3 A | 3 A |
| CRES | < 25 mΩ | < 25 mΩ |

* Specification based on lab measurements.

** All GSSG Crosstalk values are based on simulation.

## MECHANICAL SPECIFICATIONS

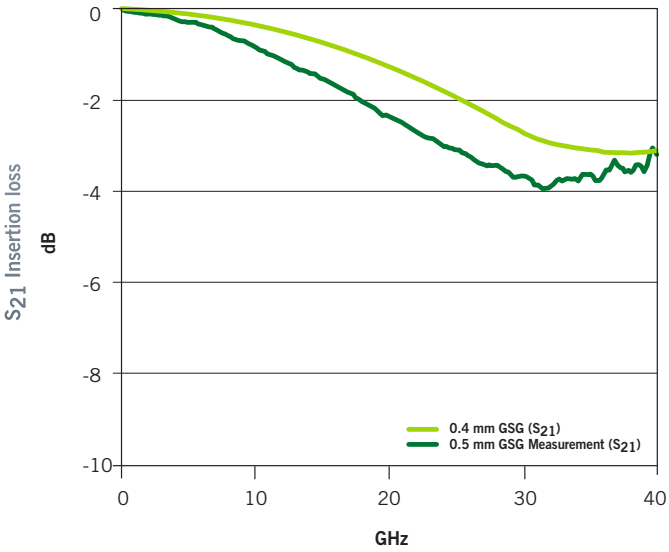
| | |
|---|---|
| Contact life | 10k insertions |
| Normal force | 40 grams/contact |
| Vertical compression | 0.15mm |
| Contact height | 1.95 mm |

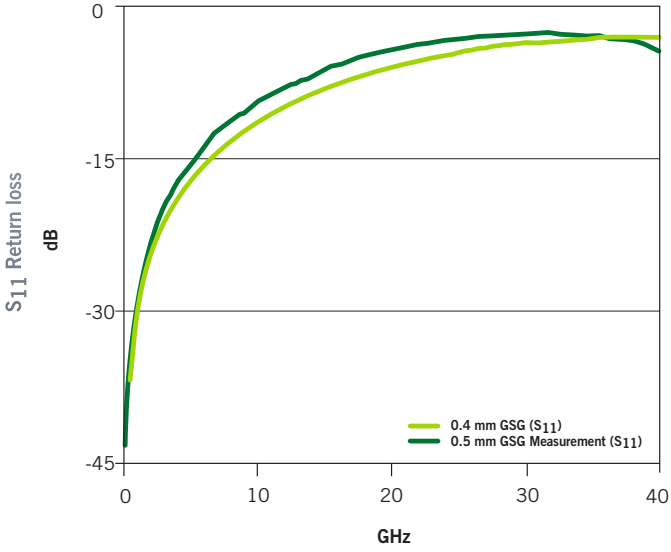
## MATERIAL SPECIFICATIONS

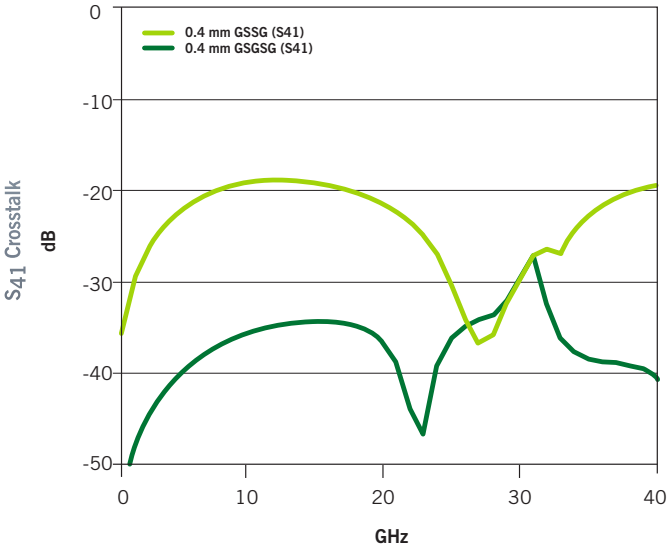
| | |
|---|---|
| Contact base material | Copper (Cu) alloy |
| Contact plating | Gold (Au) over Nickel (Ni) |
| Housing | Polyimide (Cirlex®) |
| Frame | Torlon® 5030, Ultem2300 or equivalent |
| Environmental | -55° C to 155° C |

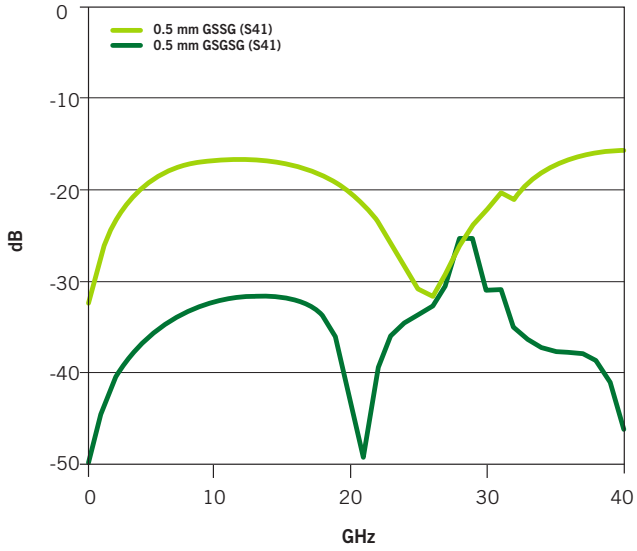
Overall performance may vary based on applications requirements and maintenance schedules. Additional performance data may be available on request.

## PERFORMANCE

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