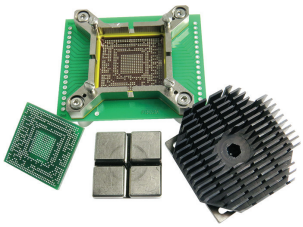
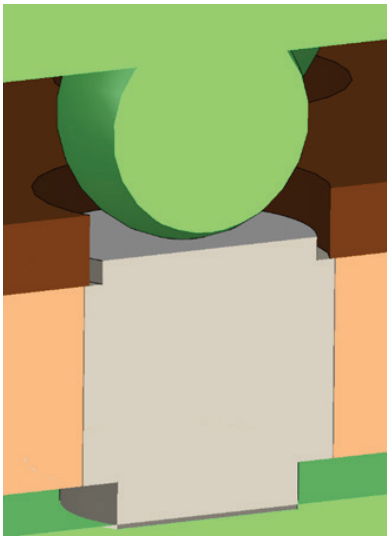
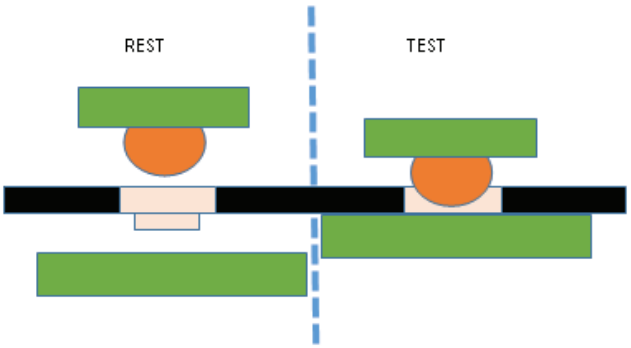
GTC ELASTOMER SOCKETS FOR HIGH SPEED APPLICATIONS



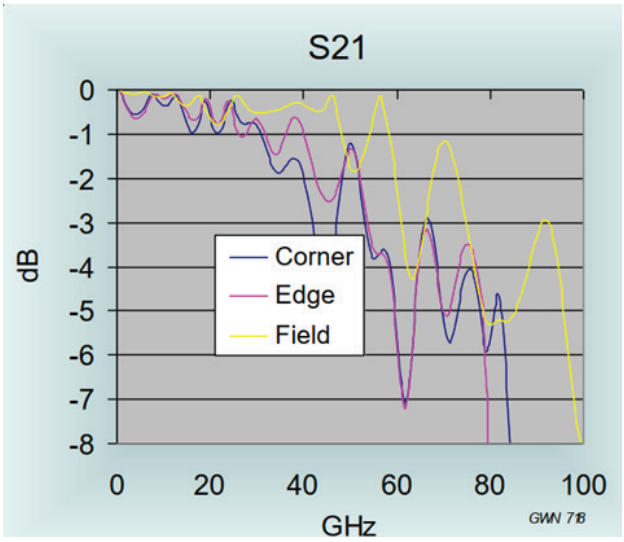
BGA sockets using GTC elastomer contact technology provide up to 40.0 GHz signal speed in the smallest footprint for ATE, prototype and test applications. These sockets support pitches from 0.35 mm to 1.27 mm. The GTC boasts almost twice the compliance over the standard GT product line and a higher power rating of up to 20 amps.

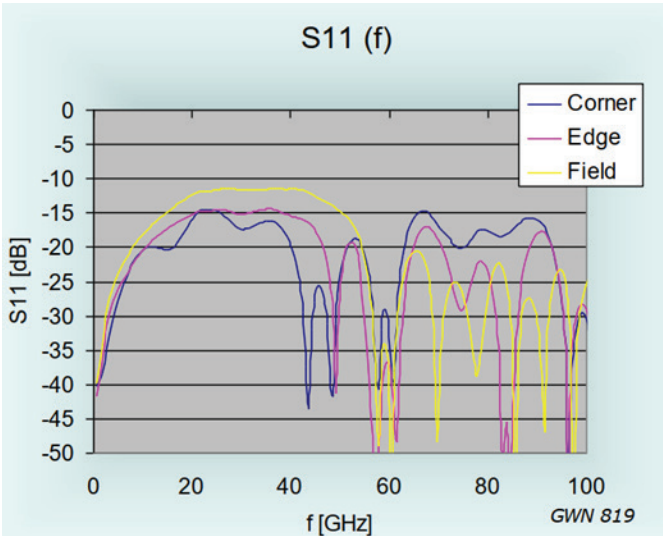
Features	Benefits
Shortest contact	Highest bandwidth applications – 40 GHz
Silver particles	Low contact resistance – 50 mOhms
Small socket footprint	2.5 mm per side larger than actual IC packages
Laser cut substrate	Precise contact location – 25 micron positional tolerance
Individual buttons	No mechanical coupling – 0.30 mm compliance
High amperage	Over 8 amps of power at 1.0 mm pitch

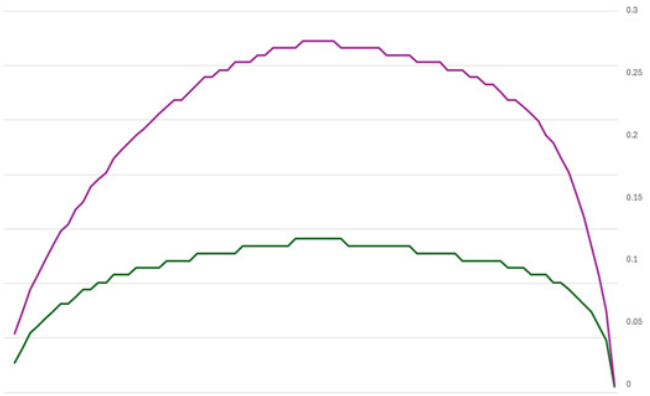




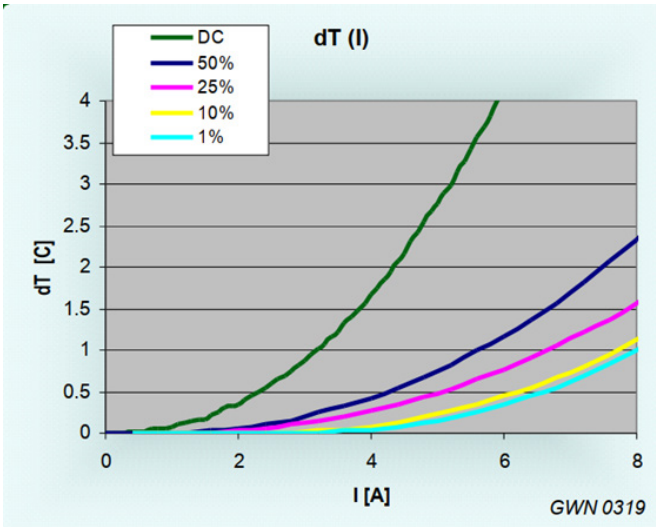
Performance







Compliance improvement of GTC show in purple



Temperature rise as a function of drive current

Mechanical specification: 0.4 mm pitch BGA

Force per contact	25 - 60 grams
Insertion/Extraction cycles	> 1,000*
Compressed Height (@test)	0.38 mm
Compliance	0.3 mm

*Cycle life shown at room temperature. Reduced cycle life is expected when used at extreme temperatures, thermal cycling, improper force, cleaning and handling.

Electrical specification: 0.4 mm pitch BGA

Insertion loss S21@-1dB	48.5 GHz
Return loss S11@-20dB	10.9 GHz
Self inductance	0.04 nH
Mutual inductance	0.031 nH
Capacitance to ground	0.27 pF
Mutual capacitance	0.016 pF
Impedance	42.6 Ohms
Time delay	4.8 ps
DC Current carrying capacity	> 8.0 A @20°C rise
Contact resistance	20 mOhms

Material specification:

Operating temperature	-55°C to + 160°C
Housing	Polyimide (Cirlex®) / Silicone
Contact	Proprietary silver alloy
Contact base	Proprietary silicone elastomer