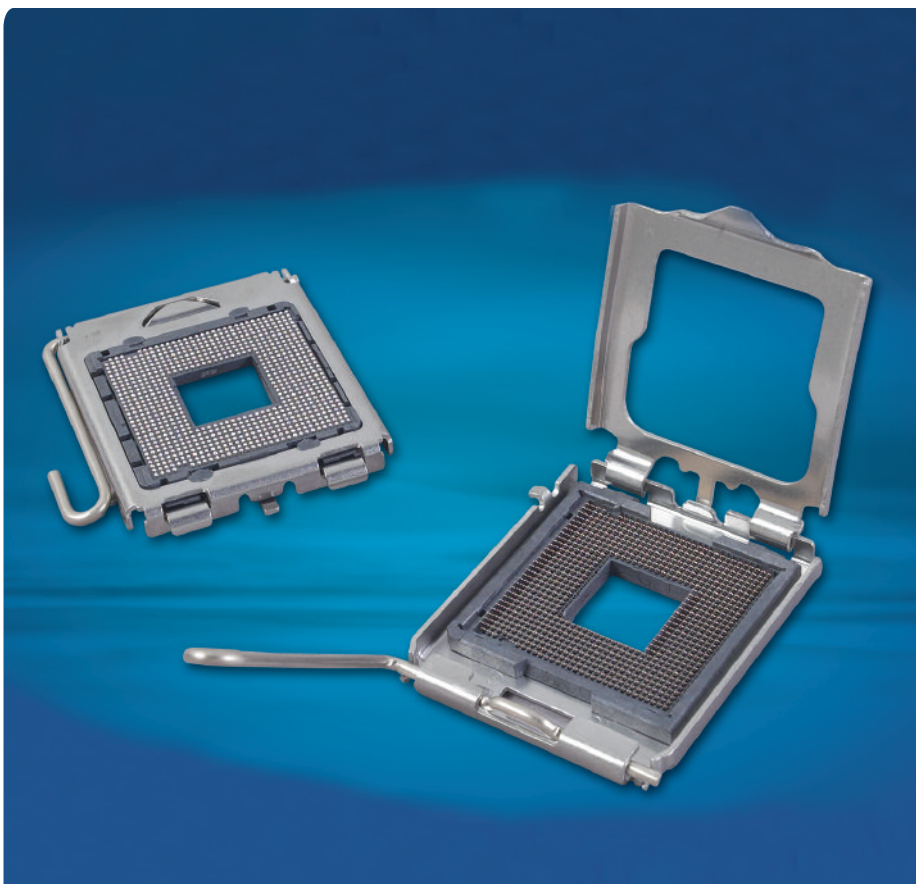


LGA775 SOCKET

DESCRIPTION

FCI has developed a 775-position Processor Socket that features process-friendly Ball Grid Array (BGA) attachment to the motherboard along with a Land Grid Array (LGA) interface to the microprocessor. The BGA technology helps the socket assembly self-center on the PCB pads as well as self-level in the z-axis direction. A pre-installed cover facilitates placement using automated pick-and-place equipment. An ergonomic lever mechanism actuates the socket once the processor chip has been properly seated. The LGA 775 Socket has a low normal force contact with wiping action that assures consistent and reliable performance. The LGA 775 direct socket loading hardware features a load plate, socket body and stiffener to transfer the heat sink load to the motherboard, away from the connector interface. The LGA 775 performs as a low inductance device ($<4\text{ nH}$) with $<1\text{ pF}$ capacitance pin-to-pin to optimize the processor chip's high-speed electrical performance. LGA 775 Socket technology is utilized with 775 position processor chips in desktop computer applications. The LGA 775 Socket is used in conjunction with SATA, ExpressCard™ modules, DDRII, PCI Express™ Card Edge, and other standards-based connectors offered by FCI.



FEATURES & BENEFITS

- LGA 775 socket at slightly over 1mm pitch grid utilized for 775 position microprocessors
- Process-friendly BGA printed circuit board attachment
- LGA interface at chip for quick installation of the processor
- Low Normal Force contact with wiping action yields robust mechanical performance
- Integrated lever-actuated direct socket loading hardware to transfer the heatsink load to the PCB
- Low Inductance ($< 4.0\text{nh}$) loop and capacitance ($<1\text{pF}$) pin-to-pin assures superior electrical performance
- Lead-free and RoHS compliant

TARGET MARKETS / APPLICATIONS

- Motherboards that accept 775 position microprocessors

MATERIALS

- Contact Base: Copper Alloy
- Plating: Gold over Ni Plating
- Housing & Pickup Cover:
High Temp Polymer UL94-V0 Black
- Hardware: Stainless Steel

ELECTRICAL PERFORMANCE

- Low Level Contact Resistance:
 - Max. chain contact resistance is 28 milliohms
 - Socket average contact resistance is 15.2 milliohms max.
- Inductance: less than 4.0nH at 1GHz
- Capacitance: less than 1pF at 400MHz
- Current Rating: 0.6 amp/contact (200 contacts) at 45°C T-rise

MECHANICAL PERFORMANCE

- Durability: 20 cycles Min
- Mechanical Vibration: EIA-364-28 Test Condition VII D
Random Vibration 3.13 gRMS, 5Hz-20Hz .01g2/Hz
sloping to .02g2/Hz 20Hz-500Hz .02g2/hZ
- Mechanical Shock: EIA-364-27: 50g, 1/2 Sine, 11 msec duration pulse
- Activation Force – The amount of force required to close the load lever shall be less than or equal to 8.6 lbf

ENVIRONMENTAL

- Temperature Cycling- EIA 364-32,
-25 to 100°C for 925 cycles
- Steady State Humidity- EIA 364-31,
85°C at 85% RH for 703 hours
- High Temp Life-EIA 364-17, 125°C for 728 hours

SPECIFICATIONS

- Product Specification: GS-12-266
- Application Specification: GS-20-044

APPROVALS AND CERTIFICATIONS

- Designed to the Industry Standard Design Guide

PACKAGING

- Standard JEDEC Trays with pick and place caps

PART NUMBERS

- Lead free 10055576-022LF