

Mini USB (USB 2.0) – GMSB052 & GMSB053 Series

COMPLIANT TO USB 2.0 SPECIFICATION; IDEAL FOR CONSUMER APPLICATIONS

As the leading manufacturer of interconnects, Amphenol develops a wide range of Mini USB connectors for consumer, datacom, industrial, and automotive applications. Amphenol's Mini USB Type B design offers customized design. Mini USB 2.0 connector takes up only about 1/8 of the space of standard USB-B, five circuits, with one circuit reserved for future use in host identification between devices. These portable devices are used for consumer applications and charging. These are available in both SMT and through-hole receptacles available.

- 5 positions
- USB 2.0 specification compliance
- High-speed 480Mb/s transmission
- RoHS compliance



TARGET MARKETS



FEATURES

- 5 positions, USB 2.0 specification compliant
- 4 solder pad at shell ensure mounting force
- Shielding design
- Stable signal high-speed up to 480Mb/s transmission
- 5,000 mating cycles
- Rugged Gold-plated leaf contact for reliability needs
- Halogen-free material
- 1/8 the size of standard USB-B

BENEFITS

- Plug operation includes a snap in catch with tactile feedback ensuring an easy connection
- Robust mount on PCB
- Excellent Electromagnetic Interference (EMI)/Radio-Frequency interference (RFI) performance
- High performance in Signal Integrity (SI) parameters
- Rugged durability
- Improves contact resistance and prevents corrosion
- Meets environmental, health and safety requirements
- Improved real estate space savings

TECHNICAL INFORMATION

MATERIAL

- Housing: High Temperature Thermoplastic, complies with UL 94V-0, Black
- Contact: Copper alloy, Selective gold plated on contact area, 50u" min. nickel under-plated and gold flash overall or Tin 100u"min selective plated
- Shell: Copper Alloy. Nickel and Matte Tin plating overall options

ENVIRONMENTAL

- Operating Temperature: -55°C to +85°C
- Shipping and Storage Temperature: -20°C to +60°C
- Thermal Shock: No physical damage
 - Contact Resistance: $\Delta R=+10m\Omega$ max.
- Cyclic Temperature Humidity: No physical damage
 - Contact Resistance: $\Delta R=+10m\Omega$ max.
- Temperature Life: No physical damage
 - Contact Resistance: $\Delta R=+10m\Omega$ max.
- Solderability: 95% of immersed area must show no voids, Pin holes.
- Soldering Heat: No damage or discoloration of connector materials
- Mixed Flowing Gas: No physical damage
 - Contact Resistance: $\Delta R=+10m\Omega$ max.
- Salt Spray Test: No physical damage
 - Contact Resistance: $\Delta R=+10m\Omega$ max.

PACKAGING

- Tray, Tape and Reel

SPECIFICATION

- Amphenol Product Specification: PS-7426 / PS-7377

MECHANICAL PERFORMANCE

- Insertion Force: 35N (3.57 Kgf) max.
- Withdrawal Force:
 - Initial: 7N (0.71 Kgf) min.
 - Final: 3N (0.31 Kgf) min.
- Durability: 5,000 mating/unmating cycles
 - Contact Resistance: 50m Ω max.
- Vibration: No disturbance greater than 1 μ s
- Mechanical Shock: No disturbance greater than 1 μ s

ELECTRICAL PERFORMANCE

- Low Level Contact Resistance:
 - Initial: 40m Ω max.
 - Final ΔR : 10m Ω max.
- Insulation: 100m Ω min.
- Voltage Rating: 30 V DC
- Current Rating at T30°C max.: 1.0A (1.5A max.)

TARGET MARKETS/APPLICATIONS



GPS



Digital Media Player
Gaming
Handsets
Set Top Box
TV Panel



Server



POS System

PART NUMBERS

Description	Orientation	Pins	Application	Tail Pin Length (mm)	Shell Hold Down Length (mm)	Part Numbers
Type B, Receptacle	Right Angle	5	DIP	4	1.8	GMSB052X1X2Y1HR
Type B, Receptacle	Right Angle	5	DIP	3.1	3.1	GMSB052X1X2Y7HR
Type B, Receptacle	Right Angle	5	DIP	2.85	3.1	GMSB052X1X2Y8EU
Type B, Receptacle	Right Angle	5	DIP	2.85	1.78	GMSB052X1X2EU
Type B, Receptacle	Right Angle	5	DIP	2.85	1.8	GMSB052X1X2YEU
Type B, Receptacle	Right Angle	5	DIP	2.25	1.8	GMSB052X1X2Y5EU
Type B, Receptacle	Right Angle	5	SMT	–	–	GMSB053X1X2YEU
Type B, Receptacle	Vertical	5	DIP	2.4	2.3	GMSB051X1X2C1EU
Type B, Receptacle	Vertical, PIP	5	DIP	2.4	2.3	GMSB051X1X2C2HR