

LiteTouch | Solderless PCB Connectors

Features & Benefits

- Solderless PCB compression mount for fast and easy installation (available with screws)
- Conforms to flexible circuit boards
- Non-destructive engagement on soft or thin ($<.010''$) dielectric cores
- Series: SMA, 2.92mm, 2.4mm and 1.85mm
- Custom optimized PCB footprint design through simulation available
- COTS versions available through distribution

Applications

- Precision thin substrate mounting
- Ideal for high speed PCB materials
- RF test and measurement
- Stripline, microstrip and coplanar waveguide PCB launch



As frequencies increase and board substrates become thinner, the standard solderless PCB compression mount connectors in Figure 1, below, can create undesirable results on thin ($<.010''$) dielectric PCB. The LiteTouch connector, shown in Figure 2, addresses this issue by maintaining a solderless connection while keeping the board material intact.

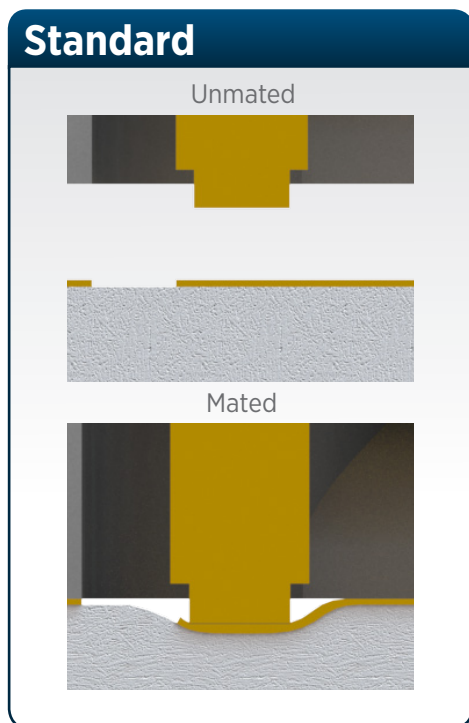


Figure 1: Unmated and mated standard solderless compression on thin ($<.010''$) dielectric PCB

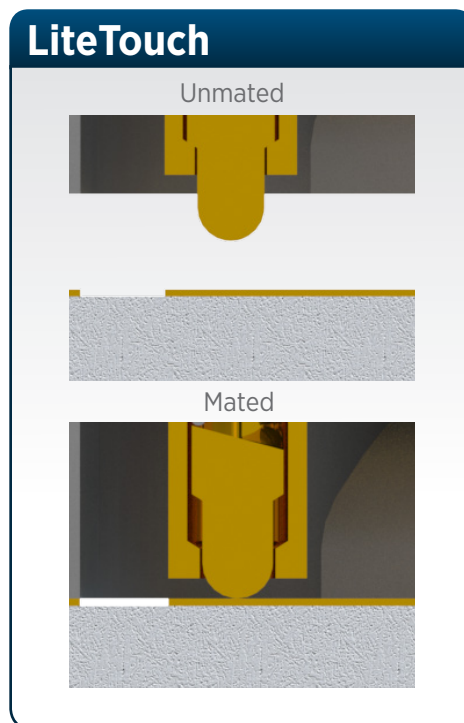


Figure 2: Unmated and mated LiteTouch solderless compression on thin ($<.010''$) dielectric PCB

Figure 3 shows the full path performance of connector to connector on the same 1” trace of a 10mil thick Rogers RO3003 CPW stackup. The performance variation is driven by the launch trace deformation into the board creating an unforeseen capacitive area. The LiteTouch maintains the structure of the board and leads to stable RF performance.

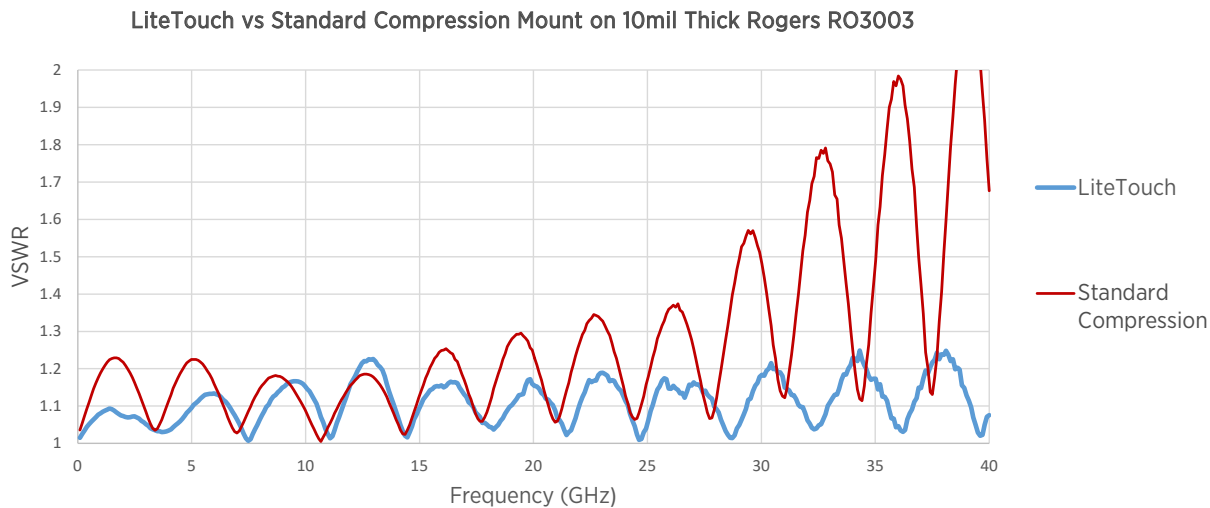


Figure 3: VSWR Comparison

Specifications				
Electrical	SMA	2.92mm	2.4mm	1.85mm
Impedance	50Ω	50Ω	50Ω	50Ω
Max Frequency	26.5 GHz	40 GHz	50 GHz	67 GHz

Mechanical	SMA	2.92mm	2.4mm	1.85mm
Intermateability	2.92mm	SMA	1.85mm	2.4mm
Recommended Mating Torque	7 - 10 in - lbs	7 - 10 in - lbs	5 - 7 in - lbs	5 - 7 in - lbs
Recommended Board Mount Torque	12 in - oz	12 in - oz	12 in - oz	12 in - oz
Max Screw Length	0.150" + Max Board Thickness	0.150" + Max Board Thickness	0.195" + Max Board Thickness	0.195" + Max Board Thickness
Mating End Clearance (See Figure 4)	0.218" Min	0.218" Min	0.236" Min	0.236" Min

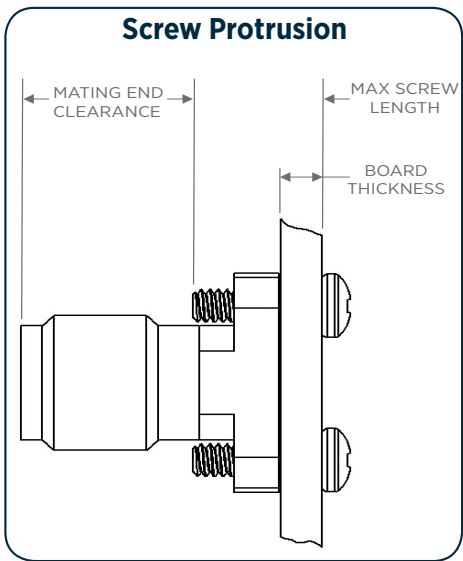


Figure 4: Mating End Clearance

Part Numbers			
Series	Max Frequency	Applications	Part Number
SMA	26.5 GHz	Stripline	SF2921-61507
		CPW / Microstrip	SF2921-61506
2.92mm	40 GHz	Stripline	SF1521-60124
		CPW / Microstrip	SF1521-60115
2.4mm	50 GHz	Stripline	SF1621-60049
		CPW / Microstrip	SF1621-60048
1.85mm	67 GHz	Stripline	SF3321-60033
		CPW / Microstrip	SF3321-60032