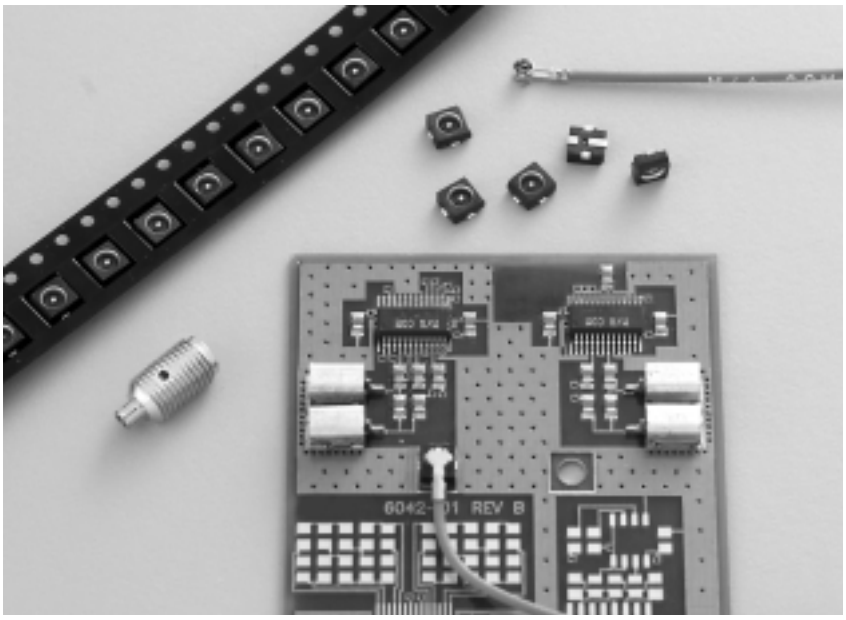
SSMT Surface Mount Interconnect System

Microminiature Surface Mount RF Connectors

Features

- 3.0 [.118] mated height
- Excellent interface retention
- Flexible micro-coax cable
- 360 degree mated rotation
- Tape and Reel packaging available



The AMP next generation SSMT surface mount Interconnect System is designed to provide superior electrical and mechanical performance for wireless communication applications. The SSMT system occupies less printed circuit board (PCB) real estate than conventional through hole coaxial connectors. An innovative microstrip mounting pattern and plug receptacle design ensure reliable grounding and PCB retention characteristics. The SSMT Interconnect System allows closer pitch/spacing, standing 3.0 [.118] (fully mated height) off the board. The mated SSMT interface allows 360 degrees of rotation providing maximum PCB design flexibility. It has been designed to provide optimal retention for applications where shock, vibration or cable flexure may be encountered. Force to disengage by cable load (cam-out) exceeds 300 grams.

The SSMT system is designed to provide the performance of much larger industry standard connectors. The SSMT Interconnect System consistently achieves broad band electrical performance through 6 GHz with a maximum VSWR of 1.20:1 at 2 GHz. This broad band performance establishes a reliable interface that can be utilized for future system upgrades without concern for performance degradation.

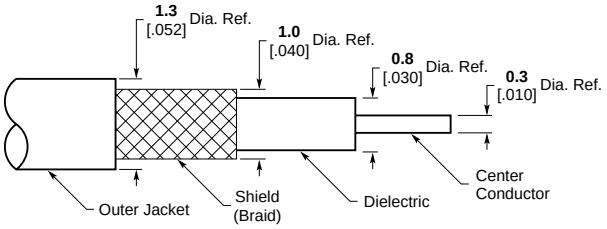
The SSMT utilizes a common OSMT plug receptacle, part number 1251802-1, which is designed for high volume assembly using surface mount technology and is available in tape and reel packaging for automatic pick and place board assembly. The mating cable jack is available terminated to a highly flexible micro-coax cable as either a pigtail, jumper or standard interseries connector assembly to meet your needs.

The SSMT Interconnect System can be manually mated, facilitating high volume assembly and eliminating the need for special engagement tooling. The SSMT interface design aligns the center contacts prior to full mating to ensure a robust mechanical engagement. Interface durability is rated at 100 mating cycles.

SSMT Surface Mount Interconnect System (Continued)

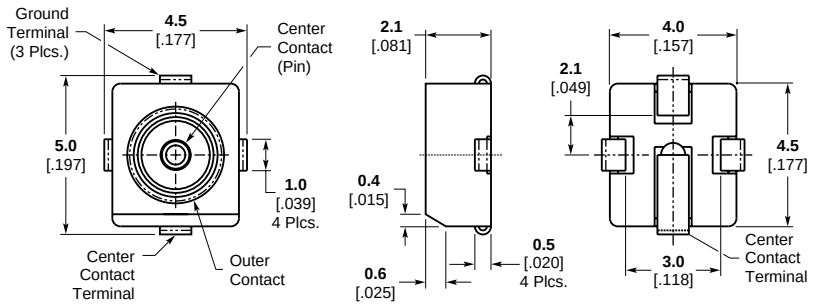
Specifications

General		
Materials		
SMT Plug	Housing: Contacts:	Polyphenylene Sulfide (PPS) Copper Alloy
SSMT™ Cable Jack	Outer Contact: Inner Contact: Dielectric:	Beryllium Copper Beryllium Copper Polypropylene, GF
Finish	Plug and cable jack - Contacts: Gold plate over nickel plate	
Electrical		
Frequency	dc - 6 GHz	
Nominal Impedance	50 Ohms	
Voltage Rating	250 Volts (VRMS Maximum) @ Sea Level	
VSWR (Mated Pair)	1.20:1 Maximum @ 2 GHz 1.40:1 Maximum @ 6 GHz	
Insulation Resistance	5000 Megohms Minimum	
Dielectric Withstanding Voltage	500 Volts (VRMS Minimum) @ Sea Level	
Contact Resistance (Connectors Only)		
Center Contact	15 milliohms Maximum	
Outer Contact	10 milliohms Maximum	
Insertion Loss (Connectors Only)	.15dB Max. @ 6 GHz	
Mechanical		
Connector Durability	100 mating cycles	
Tape/Reel Packaging (Plug)	12mm per EIA-481	
Force to Engage	5.5 lbs. Max. (3.5 lbs. typ.)	
Force to Disengage	(2.0 lbs. typ.) 4.0 lbs. Max. (2.0 lbs. typ.)	
Force to Disengage by Cable Load (camout)	300 Grams Min. (800 Grams typ. initial mate)	
Environmental		
Temperature Rating (Mated Pair)	-40°C (-40°F) to +125°C (257°F)	
Resistance to Solder Heat	Infrared, convection and vapor phase solderable (plug only). Maximum reflow time/temperature not to exceed 260°C for 3 minutes.	
Cable Specifications		
Materials		
Jacket:	FEP (polytetrafluoroethylene)	
Shield:	Silver plated copperwire, 44 AWG, 90% min. coverage	
Dielectric:	PTFE (polytetrafluoroethylene)	
Center Conductor:	Silver plated copper clad steel, 30 AWG	
Minimum Bend Radius	6.35mm (.250 inch)	
Insertion Loss (Cable Only)	0.5 dB/ft., 2.0 dB/m @ 1 GHz 0.9 dB/ft., 3.0 dB/m @ 2 GHz	
Center Conductor Resistance	.25 Ohms per foot average. 819 milliohm/meter Nom.; 250 milliohm/Ft. Nom.	

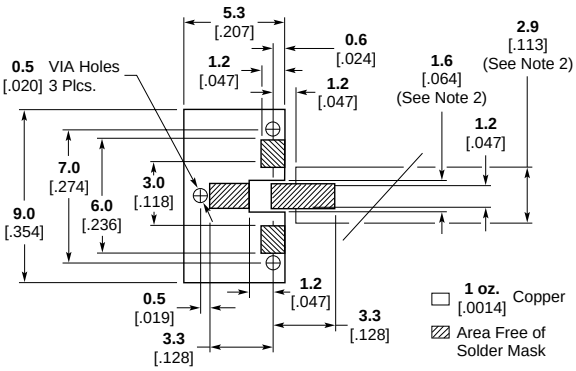


SSMT Surface Mount Interconnect System (Continued)

Straight SMT PCB Mount Plug Receptacle



Packaging	Quantity	M/A-COM Model No.	Part No.
Bulk	Multiple of 100	2367-0000-54	**1251802-1**
178 7.0 Dia. Taping	800 pcs/reel	2367-5001-54	**1083946-1**
330 13.3 Dia. Taping	3000 pcs/reel	2367-5002-54	**1055689-1**



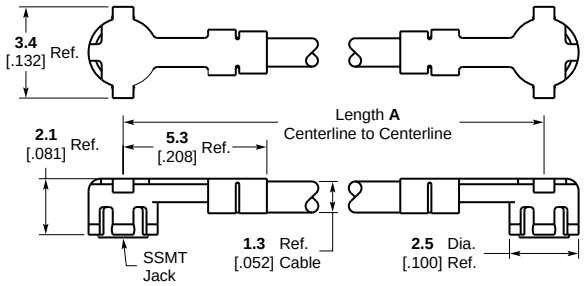
Recommended Mounting Pattern for Microstrip Line

Notes:

1. Printed wiring board material: glass epoxy. FR-4 or similar, relative permittivity: 4.8, 1 oz. copper clad both sides.
2. These dimensions valid for 1.6 [.062] board thickness.

Right Angle Jack to Jack Cable Assembly

Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-1100-24	**1044764-1**
200 [8.0]	9960-1200-24	**1064530-1**
305 [12.0]	9960-1304-24	**1064533-1**



Notes:
1. Consult AMP for non-standard cable lengths.
Length A Tolerances.

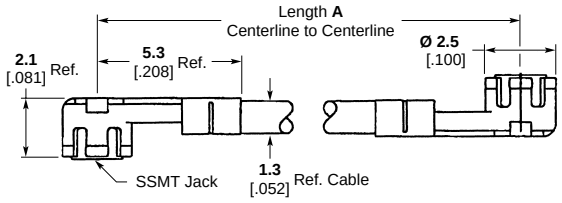
Length A	*Tolerance*
50 To 100 [3.94]	± 3 [± .12]
101 To 500 [3.98 to 19.69]	± 5 [± .20]
Over 500 [19.69]	± 10 [± .39]

2. Connector centerlines align ±30° as shown for lengths of 165 [6.5] or less. Cable assemblies over 165 [6.5] have randomly aligned connectors.
3. SSMT Jack is not mateable with OSMT High Retention plug receptacle (1055690-1)

SSMT Surface Mount Interconnect System (Continued)

Right Angle Jack to Jack Cable Assembly (180° Offset)

Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-3100-24	**1082845-1**
200 [8.0]	9960-3200-24	**1082846-1**
305 [12.0]	9960-3305-24	**1082847-1**



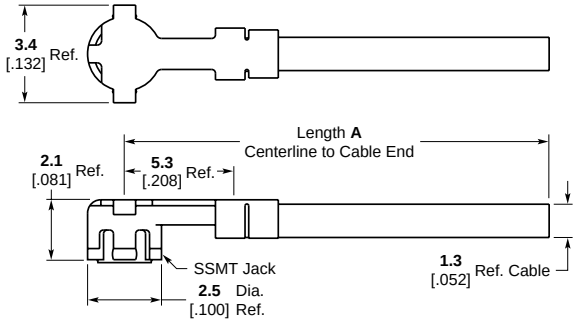
Notes:
1. Consult AMP for non-standard cable lengths.
   Cable length tolerance:
   Length A Tolerances.

Length A	*Tolerance*
50 To 100 [3.94]	± 3 [± .12]
101 To 500 [3.98 to 19.69]	± 5 [± .20]
Over 500 [19.69]	± 10 [± .39]

2. SSMT Jack is not mateable with OSMT High Retention Plug receptacle (1055690-1).
3. To avoid damaging the cable, minimize time at temperature while soldering and/or applying heat to unterminated end of cable.

Right Angle Jack Cable Pigtail

Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-2100-24	**1064535-1**
200 [8.0]	9960-2200-24	**1064538-1**
305 [12.0]	9960-2305-24	**1064540-1**
510 [20.0]	9960-2510-24	**1064542-1**



Notes:
1. Consult AMP for non-standard cable lengths.
   Cable length tolerance:
   Length A Tolerances.

Length A	*Tolerance*
50 To 100 [3.94]	± 3 [± .12]
101 To 500 [3.98 to 19.69]	± 5 [± .20]
Over 500 [19.69]	± 10 [± .39]

2. SSMT Jack is not mateable with OSMT High Retention Plug receptacle (1055690-1).
3. To avoid damaging the cable, minimize time at temperature while soldering and/or applying heat to unterminated end of cable.

SSMT Surface Mount Interconnect System (Continued)

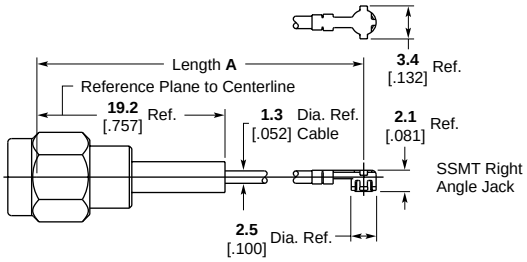
Inter-Series Cable Assemblies

Notes:
1. Consult AMP for non-standard cable lengths:
   Length A Tolerances.

Length A	*Tolerance*
50 To 100 (3.94)	± 3 (± .12)
101 To 500 (3.98 to 19.69)	± 5 (± .20)
Over 500 (19.69)	± 10 (± .39)

2. Connectors are randomly aligned unless otherwise noted.
3. SSMT Jack is not mateable with OSMT High Retention Plug receptacle (1055690-1).

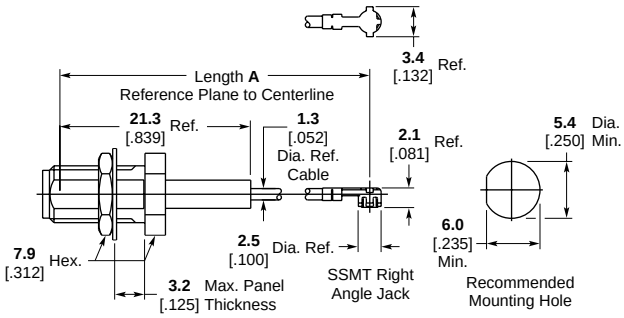
SMA Straight Plug



Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-4100-01	**1064543-1**
200 [8.0]	9960-4200-01	**1064552-1**
305 [12.0]	9960-4305-01	**1064560-1**

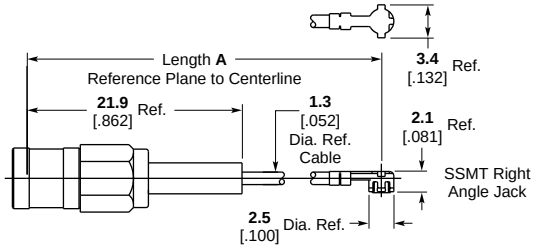
Note:
1064552-1 recommended for customer system verification.

SMA Bulkhead Jack



Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-4100-02	**1064544-1**
200 [8.0]	9960-4200-02	**1064553-1**
305 [12.0]	9960-4305-02	**1064561-1**

SMB Straight Plug

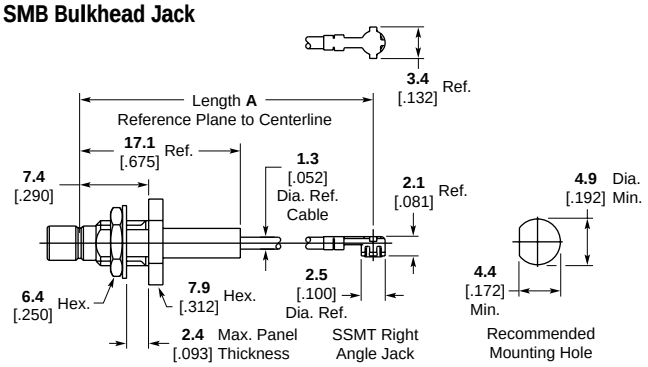


Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-4100-03	**1064545-1**
200 [8.0]	9960-4200-03	**1064554-1**
305 [12.0]	9960-4305-03	**1064562-1**

SSMT Surface Mount Interconnect System (Continued)

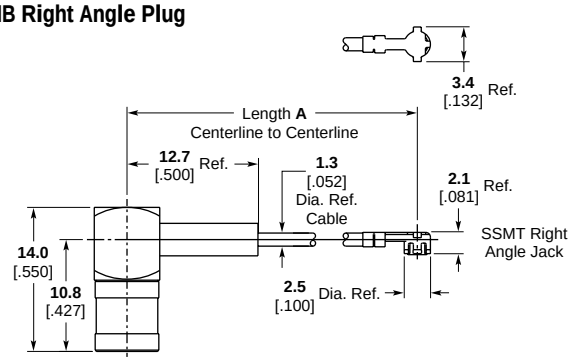
Inter-Series Cable Assemblies (Continued)

SMB Bulkhead Jack



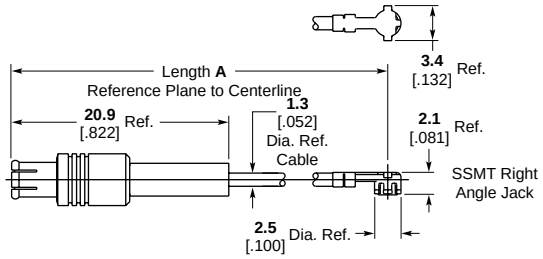
Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-4100-04	**1064546-1**
200 [8.0]	9960-4200-04	**1064555-1**
305 [12.0]	9960-4305-04	**1064563-1**

SMB Right Angle Plug



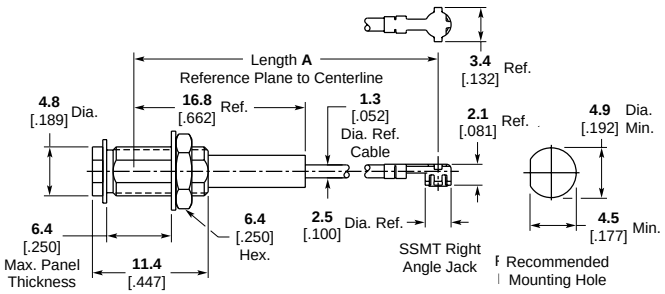
Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-4100-05	**1064547-1**
200 [8.0]	9960-4200-05	**1064556-1**
305 [12.0]	9960-4305-05	**1064564-1**

MCX Straight Plug



Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-4100-06	**1064548-1**
200 [8.0]	9960-4200-06	**1064557-1**
305 [12.0]	9960-4305-06	**1064565-1**

MCX Bulkhead Jack

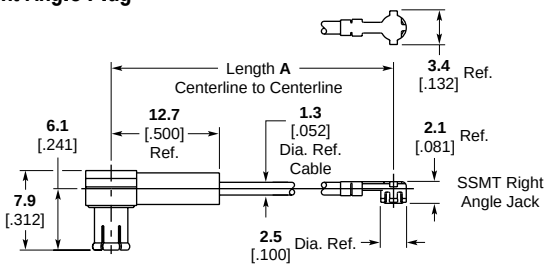


Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-4100-07	**1064549-1**
200 [8.0]	9960-4200-07	**1064558-1**
305 [12.0]	9960-4305-07	**1064566-1**

SSMT Surface Mount Interconnect System (Continued)

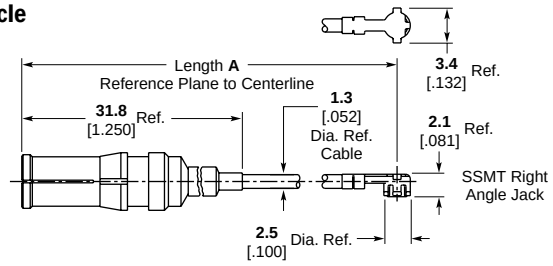
Inter-Series Cable Assemblies (Continued)

MCX Right Angle Plug



Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-4100-08	**1064550-1**
200 [8.0]	9960-4200-08	**1064559-1**
305 [12.0]	9960-4305-08	**1064567-1**

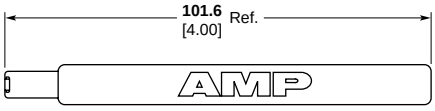
50 Ohm D-Sub Coaxial Receptacle



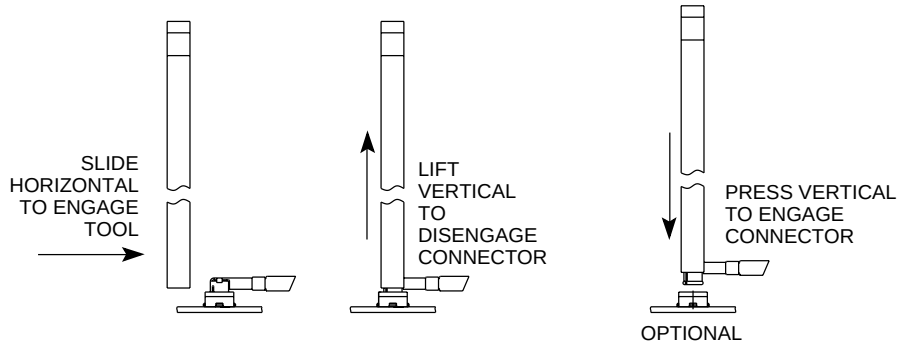
Assembly Length (A)	M/A-COM Model No.	Part No.
100 [4.0]	9960-4100-09	**1064548-1**
200 [8.0]	9960-4200-09	**1064554-1**
305 [12.0]	9960-4305-09	**1064568-1**

Tools

SSMT Disengagement Tool



M/A-COM Model No.	Part No.
2598-5342-54	**1221286-1**



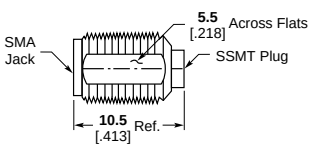
Use of Engagement/Disengagement Tool

Note: The SSMT disengagement tool can be utilized as an optional engagement tool versus manual hand installation.

Adapters

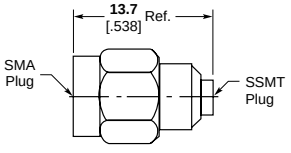
SSMT to SMA Between Series Adapters

SSMT Plug to SMA Jack Adapter



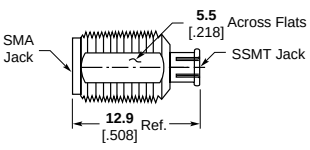
M/A-COM Model No.	Part No.
2382-2240-00	**1055696-1**

SSMT Plug to SMA Plug Adapter



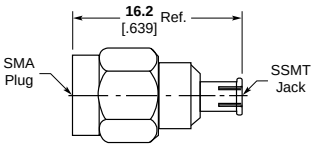
M/A-COM Model No.	Part No.
2381-2241-00	**1055695-1**

SSMT Jack to SMA Jack Adapter



M/A-COM Model No.	Part No.
2380-2240-00	**1055694-1**

SSMT Jack to SMA Plug



M/A-COM Model No.	Part No.
2382-2241-00	**1055697-1**

Engineering Notes (Continued)