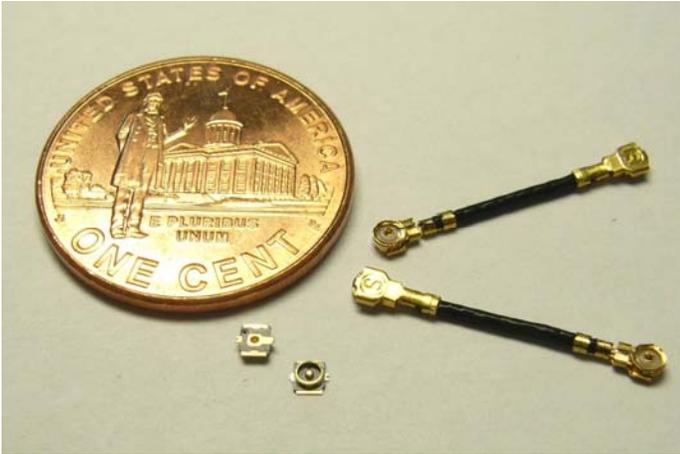


Sunridge MCH Series –Ultra Miniature Coaxial Interconnect, 1.2mm Mated Height



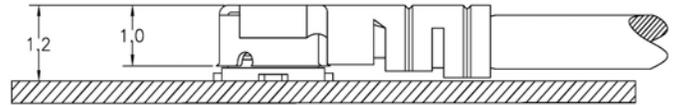
Sunridge MCH series coaxial product fulfills the rigorous requirements of high frequency data transmission in digital world. Constructed with advanced mechanical-components and supreme-grade Teflon coax cable, MCH delivers high electrical performance of typical 1.3 max V.S.W.R. at 6.0 GHz, while providing for a sturdy interconnection engagement in a slim form factor of 2.0mm x 2.0mm footprint by 1.2mm mated height.



■ Features

- Space Economy: 2.1mm x 2.0mm PCB footprint, mated height of 1.2 mm
- Teflon Cable s: Silver plated center conductor, Teflon dielectric and jacket.
- PCB socket: Integral molded construction ensures product reliability.
- Sturdy Connection: Lead-in and interlock features among mating pair ensure solid coupling.
- Accessory: Insertion/Extraction tool, test adapters for connection to MCH cable head and PCB connector

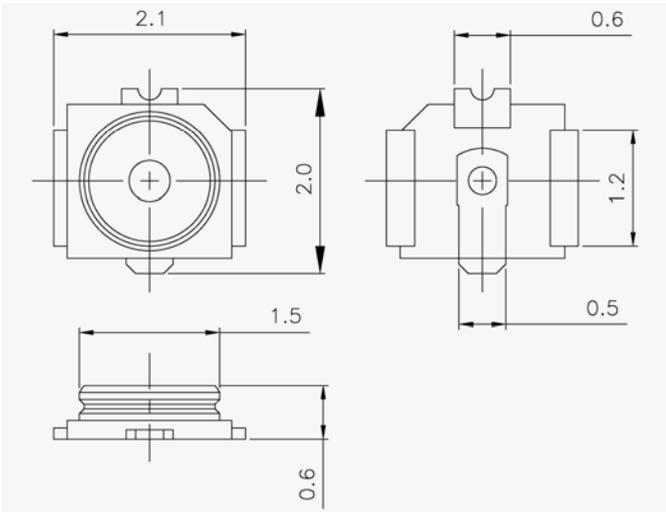
■ Form Factor



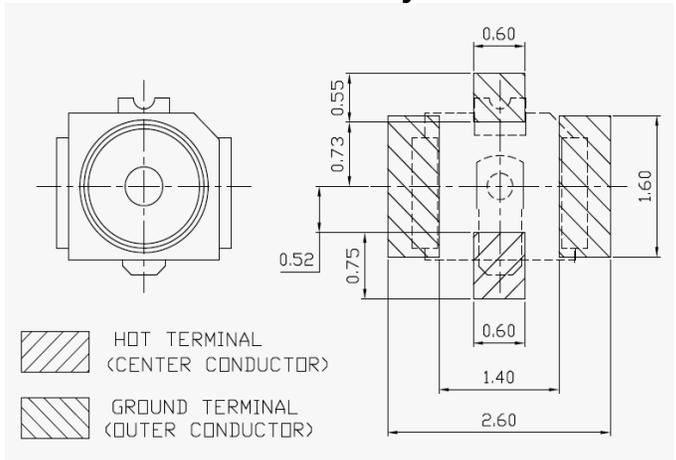
Typical Application:

Smartphone, cordless telephone (analog and digital), GPS, and other microwave radio and measurement equipment, portable or wearable IT/communication devices.

■ PCB Connector Pn: MCH-ST-00T



■ Recommended PCB Layout



■ Material Spec

- Outer contact:** Copper Alloy, Gold Plated
- Center Contact:** Copper Alloy, Gold Plated
- Insulator:** Engineering Plastic.
- Cable:** Silver plated center conductor with Teflon dielectric and jacket.

Characteristics

Frequency Range	DC to 6GHz
Nominal Impedance	50 ohm
Temperature Range	-40°C to +90°C
Contact Resistance	25m ohm max
Withstanding Voltage	AC 200Vrms
Insulation Resistance	500M ohm min
Durability	20 Cycles



www.sunridgecorp.com

(dimension: mm)



Sunridge Corporation

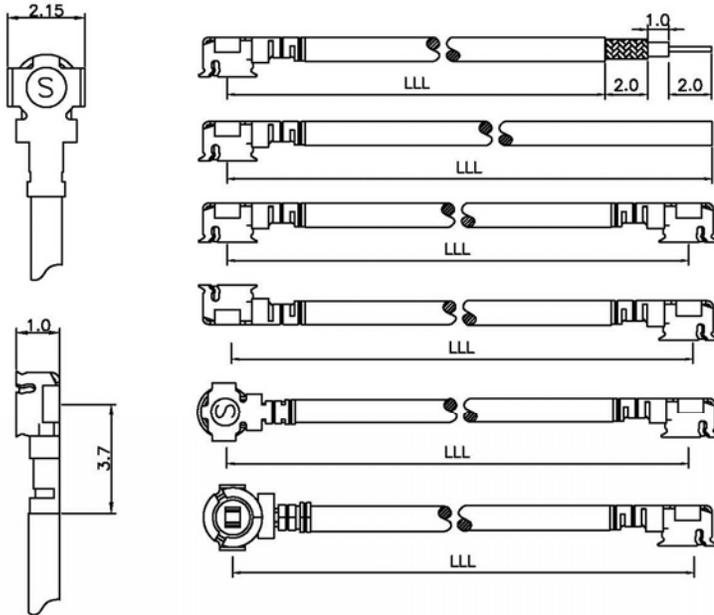
USA Headquarters: 1-626-535-1780
 Taiwan Operations: +886-2-2906-2119
 E-mail: sales@sunridgecorp.com

Specialist in Interconnect Solutions

Sunridge MCH Series –Ultra Miniature Coaxial Interconnect, 1.2mm Mated Height



MCH Cable Assembly



PN: MCH-SH-XX-LLL-T

PN: MCH-SH-XX-LLL-F

PN: MCH-DH-XX-LLL

(Both connectors face down)

PN: MCH-DH-XX-LLL-R1

(One connector faces down, one up)

PN: MCH-DH-XX-LLL-R2

(End view: one connector faces down, one right)

PN: MCH-DH-XX-LLL-R3

(End view: one connector faces down, one left)

P/N Designation

MCH - -68- LLL -
 A B C D

A. Head Configuration: SH: Single-Headed Cable construction
 DH: Double-Headed Cable construction

B. Coaxial Cable Code: #68 cable, 0.81mm OD, see cable spec

C. Length (in mm): e.g.: LLL = 200, 200mm, LLL=075, 75mm

D. End Cut (SH only): T: open end striped & tinned.

F: open end flat cut

D. Orientation: Blank: Both connectors face down
 (for DH) R1: One faces down, one up

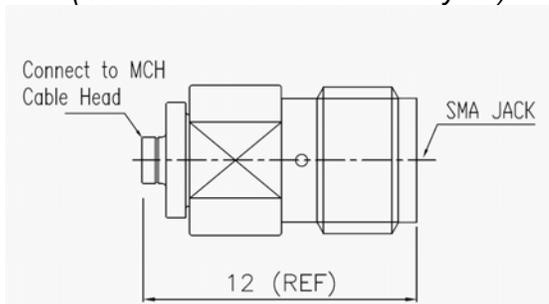
R2: End view: near one faces down, far one right

R3: End view: near one faces down, far one left

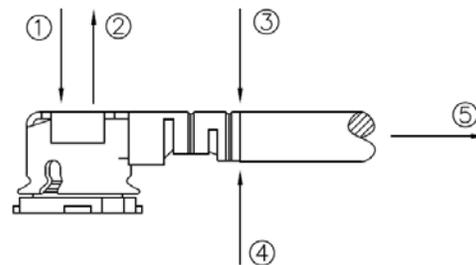
Insertion/Extraction Tool Pn: ET-MCH



Test Adaptor Pn: MCHP-SMAJ (Connection to Network Analyzer)



Mechanical Application



① Insertion force (with tool): 900gf.

② Extraction force (with tool): 600gf

③ Retention, downward force: n/a

④ Retention, upward force: n/a

⑤ Retention, pull back: 500gf min

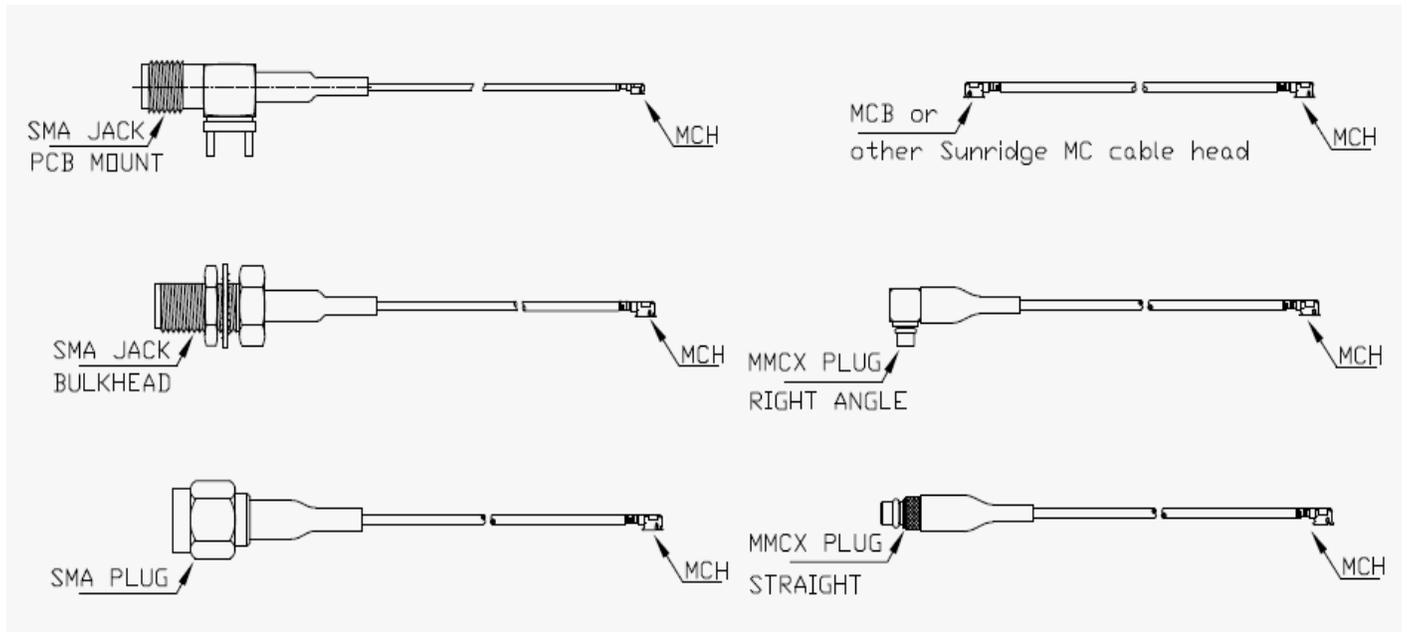
Durability: 20 cycles

Sunridge MCH Series –Ultra Miniature Coaxial Interconnect, 1.2mm Mated Height



■ Integrated Solution

MCH- cable can be assembled with another RF connector to serve a wide variety of applications. Typical MCH- cable assy interconnections, for example, are: "MCH-to-MCH" or "MCH-to-MMCX" - to integrate the module onto host board; MCH-to-SMA Jack Bulkhead - to connect from module directly to panel mounting; or "MCH-to-SMA Jack pcb mount" - to connect from module to the edge of host board, etc. Sunridge is committed to offer an effective. MCF- cable solution for each design requirement. Send your project inquiry to engineering@sunridgecorp.com, and we will promptly respond it with our engineering proposal.



■ Cable Spec

Cable Designation Code		#68	
Inner conductor	No. and Dia.	(No./mm) 7/0.05	
	Material	— Silver plated copper wire	
	Total Dia.	(mm) 0.15	
Dielectric	Material	— PFA	
	Total Dia.	(mm) 0.4	
Outer conductor	Material	— Silver plated copper wire	
	Dia. of wire	(mm) 0.05	
	Total Dia.	(mm) 0.65	
Jacket	Material	— PFA	
	Nominal thickness	(mm) 0.08	
Overall Dia.		(mm) 0.81	
Nominal impedance		(Ohm) 50	
Voltage rating		Vrms Max. 300	
Nominal static capacitance		(pF/m) 96	
Insertion loss	dB/m at 1GHz		3.53
	dB/m at 2GHz		5.17
	dB/m at 2.4GHz		5.71
	dB/m at 3GHz		6.45
	dB/m at 5GHz		8.53
	dB/m at 6GHz		9.42



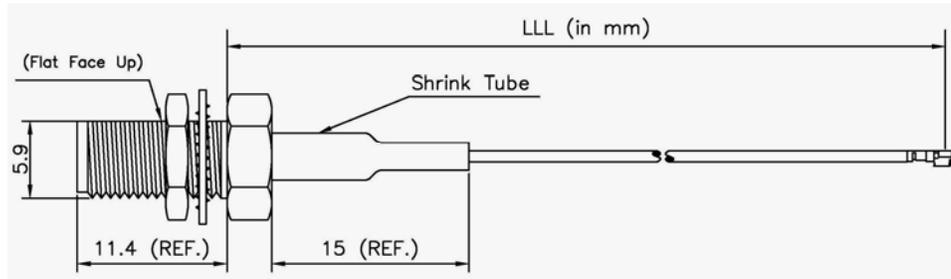
Sunridge MCH Series –Ultra Miniature Coaxial Interconnect, 1.2mm Mated Height



MCH- Derivative Cable Assembly P/N Selector:

(Illustration of the most commonly used MCH-RF cable assy. A variety of other RF configurations is readily available at Sunridge Corp. Contact engineering@sunridgecorp.com for project inquiry.)

MCH to SMA Bulkhead Jack (Panel Mount) Cable Assembly:

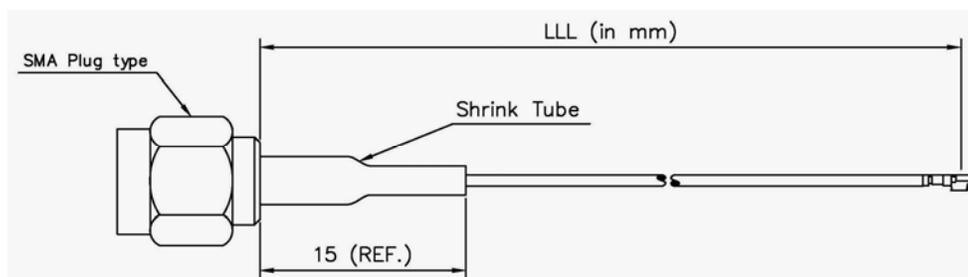


	Tolerance
50 < LLL < 100	± 2
100 < LLL < 200	± 3
300 < LLL < 300	± 5
300 < LLL < 500	± 10
500 < LLL < 1000	± 25
1000 < LLL	±60

LLL: Length in mm. e.g., LLL = 200 means 200mm; LLL = 073 means 73mm

Descriptions	Recommended Cable	Sunridge P/N
MCH to SMAJB	#68, 0.81 mm OD	MCH-RH-68-LLL-SMAJB003
MCH to SMAJB Reverse Polarity (RP)	#68, 0.81 mm OD	MCH-RH-68-LLL-SMAJB081
MCH to SMAJB with O-Ring Seal	#68, 0.81 mm OD	MCH-RH-68-LLL-SMAJB005
MCH to SMAJB RP with O-ring Seal	#68, 0.81 mm OD	MCH-RH-68-LLL-SMAJB083

MCH to SMA Plug Cable Assembly:



	Tolerance
50 < LLL < 100	± 2
100 < LLL < 200	± 3
300 < LLL < 300	± 5
300 < LLL < 500	± 10
500 < LLL < 1000	± 25
1000 < LLL	±60

LLL: Length in mm. e.g., LLL = 200 means 200mm; LLL = 073 means 73mm

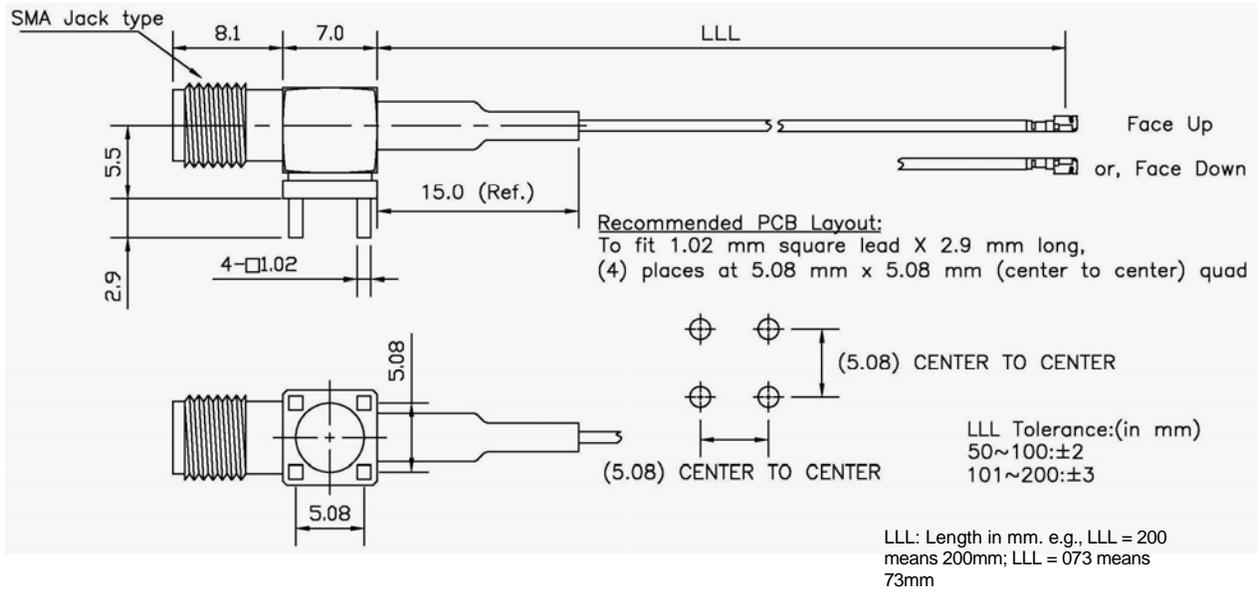
Descriptions	Recommended Cable	Sunridge P/N
MCH to SMAP	#68, 0.81 mm OD	MCH-RH-68-LLL-SMAP003
MCH to SMAP Reverse Polarity (RP)	#68, 0.81 mm OD	MCH-RH-68-LLL-SMAP081



Sunridge MCH Series –Ultra Miniature Coaxial Interconnect, 1.2mm Mated Height

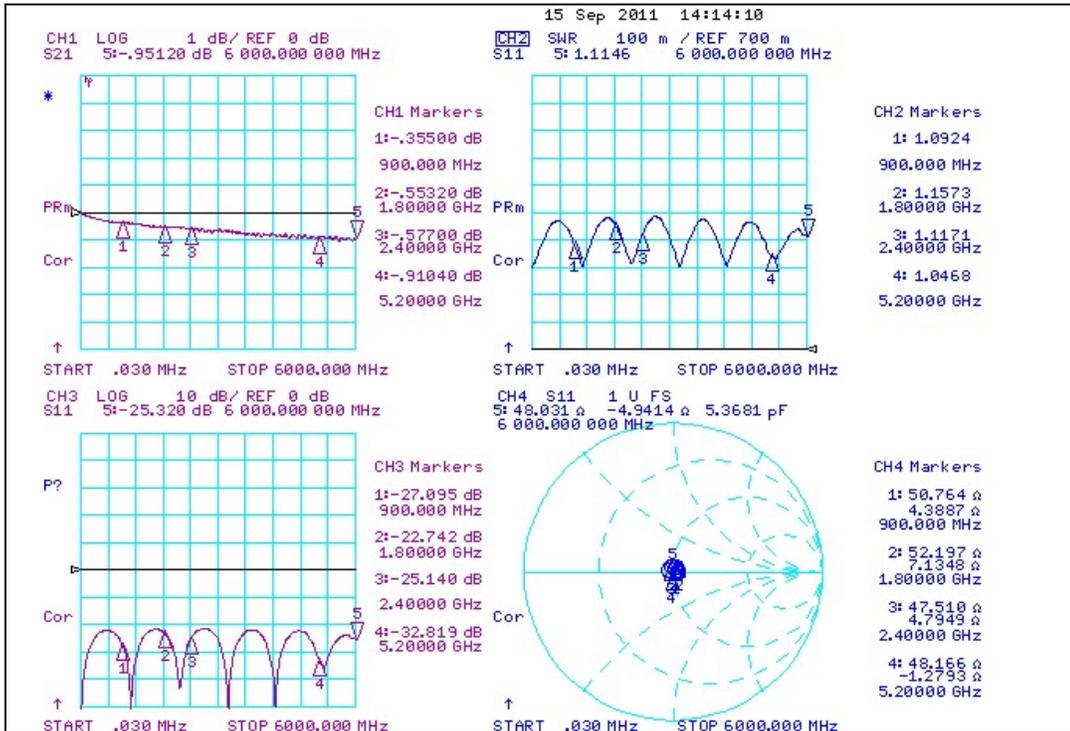


MCH to SMA Jack (PCB Mount) Cable Assembly:



Descriptions	Recommended Cable	Sunridge P/N
MCH to SMA Jack PCB Mount (Converse Orientation, MCH Faces Up)	#68, 0.81 mm OD	MCH-RH-68-LLL-SMAJX003-R1
MCH to SMA Jack PCB Mount (Regular Orientation, MCH Faces Down)	#68, 0.81 mm OD	MCH-RH-68-LLL-SMAJX003

Performance Measurement Reference



MCH-DH-68-100

Length: 100mm
Cable Code: #68
OD: 0.81mm
Inner Conductor: 0.15mm
Dielectric: 0.4mm
Outer Conductor: 0.65mm
Jacket: 0.81mm

