



*Interconnect
and Packaging Electronics*

I-PEX MHF Family
Micro Coaxial
RF Antenna Connector

May 18, 2007

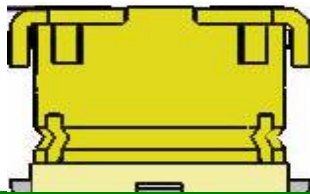
MHF Family Outlook



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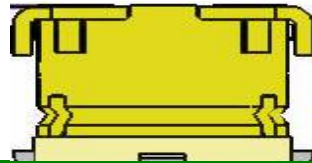
MHF/MHF-HT Plug

Max.2.5mm



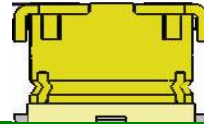
MHF-II Plug

Max.2.1mm



MHF-III Plug

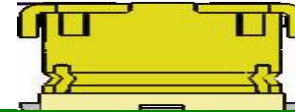
Max.1.6mm



MHF-A13 Plug

New

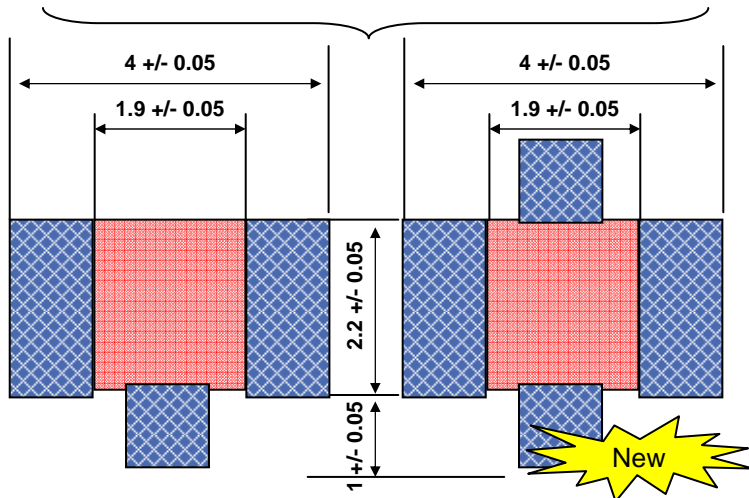
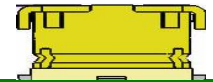
Max.1.5mm



MHF-4 Plug

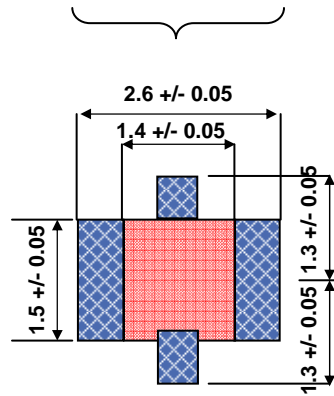
Under development

Max. 1.00mm

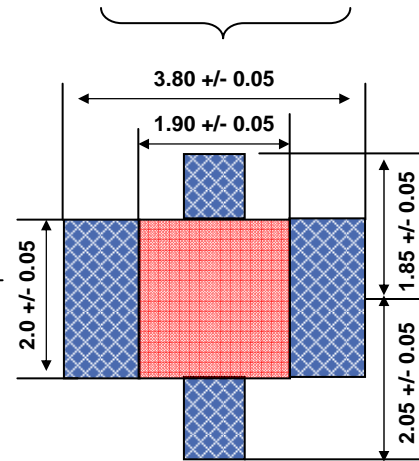


MHF Rece 3Pad

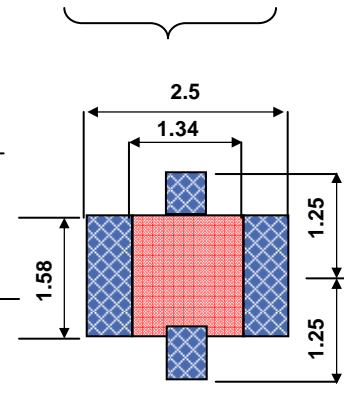
MHF Rece 4Pad



MHF III Rece



MHF-A Rece



MHF-4 Rece

Key Features

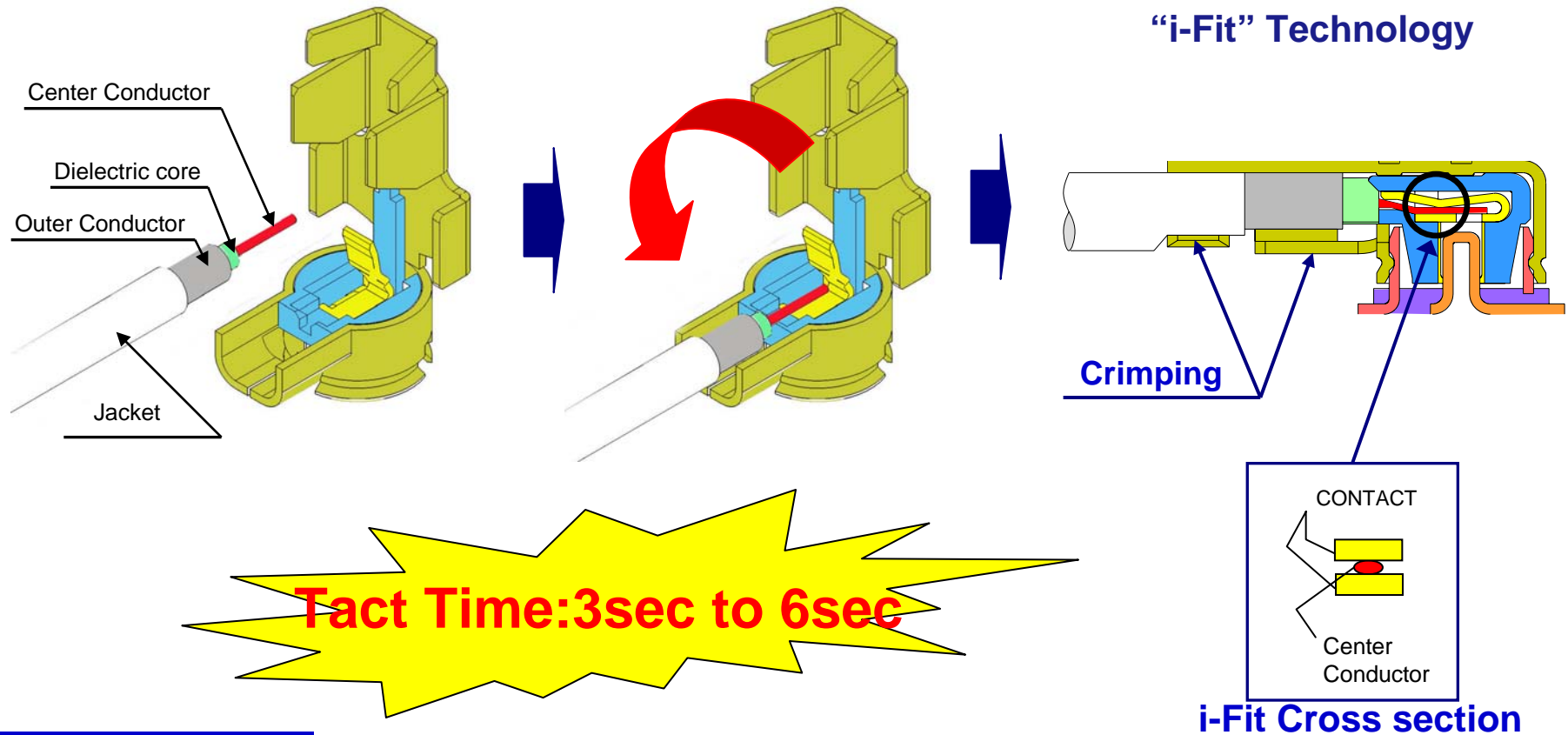
1. SMT Receptacle & Mating Plug Cable connector
2. Low Profile : **2.5 / 2.1 / 1.6 / 1.5 mm** Mating Height
3. Accepts high frequency transmission **6GHz +**
4. High reliability solderless termination by “**i-Fit®**” Technology
5. High volume low cost cable termination - **one operation** to terminate signal, ground and crimp the jacket
6. Cable types for low loss, small size, max flexibility
7. Special testing tool and Special pulling tool are available for total support service

i-Fit Technology



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Only one operation, it's connected **without soldering** by **"i-Fit"** Technology
i-Fit Technology enables the easy termination



Specification

Temperature	: -40°C ~ +90°C
Characteristic Impedance	: 50ohm
Frequency	: DC ~6GHz
V.S.W.R	: 1.3MAX (DC~3GHz) : 1.5MAX (~6GHz)
Rated Voltage	: AC60V
Contact Resistance	: 20mm-ohmMAX
Withstand Voltage	: AC200V/minute
Insulation resistance	: 500M-ohmMIN./DC100V

MHF applicable cable



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MHF Family (Mating Height)	AWG	MHF (Max.2.5mm Max.2.7mm-18)	MHF-HT (Max.2.5mm)	MHF II (Max.2.1mm)	MHF III (Max.1.6mm)	MHF-A (Max.1.5mm)
Coaxial Cable	30 (O.D 1.8mm)	○(-18)				
	30 (O.D 1.37mm)		○			
	32 (O.D. 1.32mm)	○(-32)				
	32 (O.D. 1.13mm)	○(-13)				○
	33 (O.D. 0.98mm)				○(-10)	
	36 (O.D. 0.81mm)	○(-08)			○(-08)	○

Typical Cable Specs



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<u>Cable OD</u>	<u>Attenuation 2.4 GHz</u>	<u>Attenuation 5.8 GHz</u>	<u>Min bend radius</u>
.81mm	4.9db/m	8.5db/m	9mm
1.13mm	3.3db/m	5.3db/m	12mm
1.32mm	3.4db/m	5.5db/m	14mm
1.37mm	2.6db/m	4.3db/m	14mm
1.80mm(RG-178)	3.0db/m	4.69db/m	18mm
.98MM	2.8db/m	4.4db/m	12mm

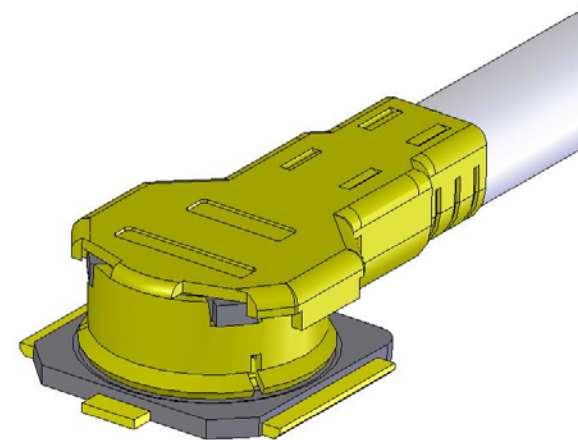
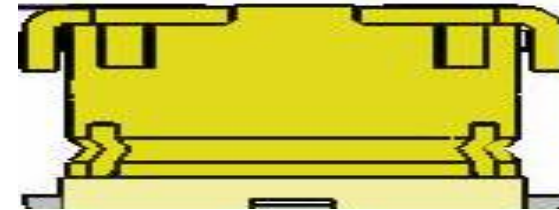
MHF-A13



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MHF-A13 ADVANTAGE

- Lowest mating height for 1.13mm O.D. wire
- Lower loss connector (.1db improvement vs MHF)
- Wider for easy mating / unmating
- Easy identification for orientation of MHF receptacle by naked eye after reflow process.



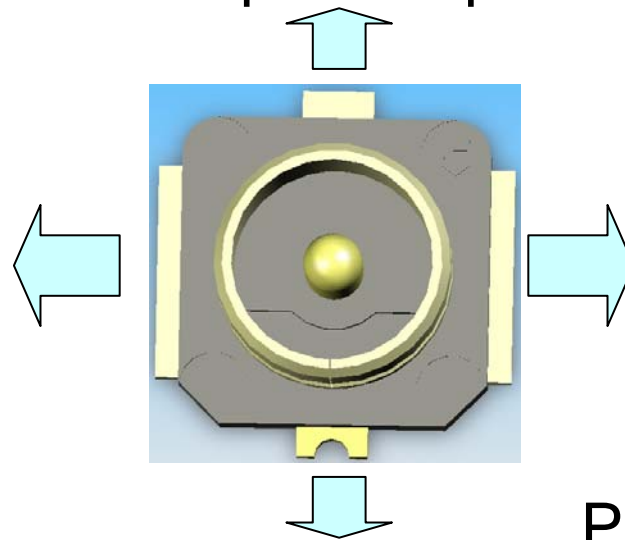
MHF Rece 4Pad



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Features

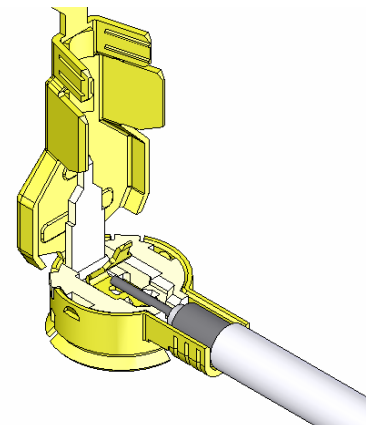
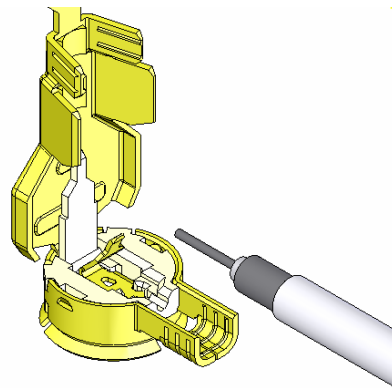
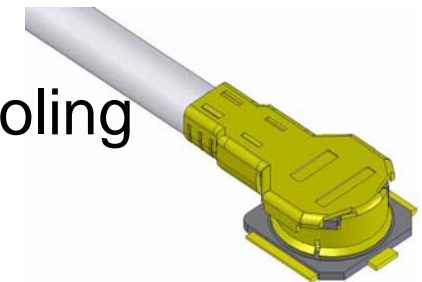
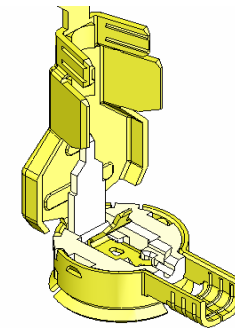
- 4th lead/pad prevents connector drift during solder reflow to assure centering on pad's
- The 3 ground leads/pads improve RF performance



P/N 20441-001E-01

MHF Business Model

1. I-PEX will supply the complete harness
or
2. I-PEX will supply the cable plug connector
+
I-PEX will supply the semi-auto termination tooling



MHF accessories



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MHF P/N	Cable OD(mm)	Accessories		
		PULLING JIG	SMA ADAPTER (for PLUG)	SMA ADAPTER (for Recep.)
20278-111R-08	0.81	90192-001	90193-001 90194-001(for INSPECTION)	90193-002
20278-111R-13/20308-111R-13	1.13			
20278-111R-32/20278-111R-32	1.32			
20278-111R-18	1.80			
21351-111R-37	1.37			
20312-011R-08	0.81	90192-001	90235-001	N/A
20311-011R-08	0.81			
20312-011R-10	0.98			
20367-001R	0.81	90287-001	90285-001 90286-001(for INSPECTION)	90285-002
20428-001R	1.13	90411-001	90413-001 90416-001(High Cycle)	90413-002

MHF Termination tooling



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MHF P/N	Cable OD(mm)	Semi Auto Machine Set P/N	Semi-Auto Machine Parts			
			Anvil	Case crimper	Shield crimper	Jacket crimper
20278-111R-08	0.81	90213-008	1983-08	1984	1985-08	1986-08
20278-111R-13/20308-111R-13	1.13	90213-013C	1983-13	1984	1985-13	1986-13
20278-111R-32/20278-111R-32	1.32	90213-032C	1983-32	1984	1985-32	1986-32
20278-111R-18	1.80	90213-018	2056-18	1984	2057-18	2058-18
21351-111R-37	1.37	90213-037	2056-37	1984	2057-37	2058-37
20312-011R-08	0.81	90225-008	1994	1954	2125-08	2126-08
20311-011R-08	0.81	90225-008A	1994	1954	2125-08	2126-08
20312-011R-10	0.98	90234-010	1994	1954	2135-10	2044-10
20367-001R	0.81	90283-008	2215-08	N/A	2216-08	2217-08
20428-001R	1.13	90420-013	2479	TBD	TBD	TBD



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