

# MINI-MULTIMATE<sup>®</sup>

## 4 & 8 POSITION



### HIGH FREQUENCY MULTIPLE INTERCONNECT SYSTEM



The Mini-MultiMate<sup>®</sup> is a compact, rugged, splash-resistant interconnect system that allows multiple high frequency connections (up to 50 GHz) with a single connector.

As an interconnect between a panel or PCB, the Mini-MultiMate's compact size and utilization of Storm Flex<sup>®</sup> 047 & 086 cables makes it the perfect fit for high density layouts.

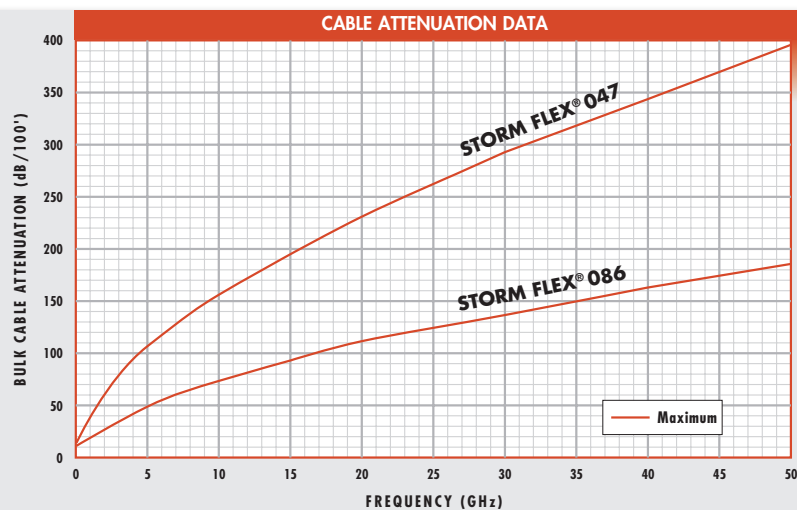
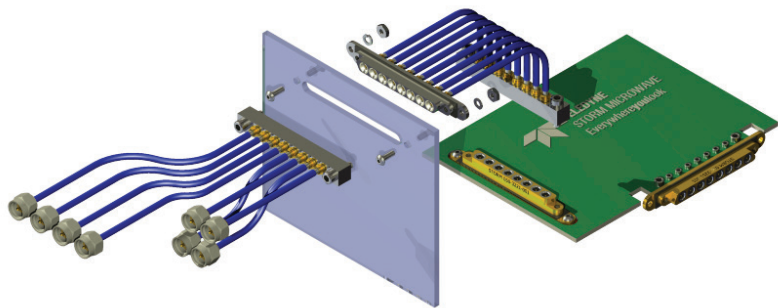
Built to be durable, Storm Flex<sup>®</sup> 047 & 086 cables have the flexibility to handle tight bends and offer superior and consistent electrical performance with flexure.

The Mini-MultiMate<sup>®</sup> also accepts 047 & 086 semi-rigid cables.

Ease-of-use features include port identification on the connector block and the ability to replace individual channel assemblies.

Applications that can benefit from use of the Mini-MultiMate<sup>®</sup> include:

- Radar
- Missile Systems
- Electronic Warfare
- Automated Test Equipment



**TELEDYNE**  
**STORM MICROWAVE**  
Everywhereyoulook™

High value microwave and  
electronic interconnect solutions

[www.teledynestorm.com](http://www.teledynestorm.com)

## MATERIALS

Contacts	<b>BODY AND CONTACT:</b>	Beryllium Copper per ASTM B196, C17300, Gold plated per ASTM B488, Type 2, Class 1.27
	<b>LOCKING RING:</b>	Beryllium Copper per ASTM B196, C17300, Gold plated per ASTM B488, Type 2, Class 0.25
	<b>INSULATOR:</b>	Teflon per ASTM D1710, Type 1, Grade 1, Class A or Torlon 4203 per MIL-P-46179
	<b>O-RING:</b>	Silicone Rubber per ASTM per A-A-59588
	<b>LOCKING NUT:</b>	Corrosion resistant steel Per ASTM 582, S30300 Alloy, Passivate per SAE-AMS-2700
Connector Block	<b>HOUSING:</b>	Brass per ASTM B16, C36000 alloy, Nickel plate per SAE-AMS-QQ-N-290 or Gold plated per ASTM B488, Class 0.25
	<b>JACK SCREWS/BUSHING:</b>	Corrosion resistant steel
	<b>GASKET:</b>	Silicone Rubber per ASTM per A-A-59588

## ENVIRONMENTAL WHEN MATED WITH STORM FLEX® 086 CABLE

Temperature	-55° C to +125° C
Vibration (High Frequency)	Meets MIL-STD-202, Method 204, Condition D
Shock (Specified Pulse)	Meets MIL-STD-202, Method 213, Test Condition I
Ingress Protection	IEC 60529 IP54 (1.0 mm probe/watersplash)

## ELECTRICAL

Nominal Impedance	50 Ohms				
Frequency	DC – 50 GHz				
VSWR (Typical; for full data see website)	Freq. Range GHz	Mated Harness Pair	On Board:	Edge Launch	Vertical Launch
	0 - 9	1.20:1		1.40:1	1.35:1
	9 - 18	1.35:1		1.55:1	1.50:1
	18 - 26.5	1.35:1		1.55:1	1.50:1
	26.5 - 40	1.60:1		1.55:1	2.15:1
	40 - 50	1.60:1		1.70:1	-
Cable Attenuation (Nominal)	0.94 dB/ft @ 18 GHz	1.17 dB/ft @ 26.5 GHz		1.71 dB/ft @ 50 GHz	
DWV (@ sea level)	325 Vrms when tested per MIL-STD-202, Method 301				
Insulation Resistance	5000 Mega Ohms minimum when tested per MIL-STD-202, Method 302, Condition B				
RF Leakage	70 dB thru 18 GHz; 63 dB thru 26.5 GHz; 55 dB thru 40 GHz per MIL-STD-1344, Method 3008 (Mode Stirred)				
Channel to Channel Isolation (Cross Talk)	95 dB min. thru 40 GHz (Testing at other frequencies available on request.)				

## MECHANICAL

	STORM FLEX® 047	STORM FLEX® 086
Cable Outer Diameter	0.055 inch (Nominal)	0.096 inch (Nominal)
Minimum Bend Radius	0.600 inch (Dynamic)	1.000 inch (Dynamic)
	0.040 inch (Static)	0.187 inch (Static)
Durability	500 mates (Minimum)	500 mates (Minimum)
Pull Force	10 lbs (Tensile Load)	10 lbs (Tensile Load)



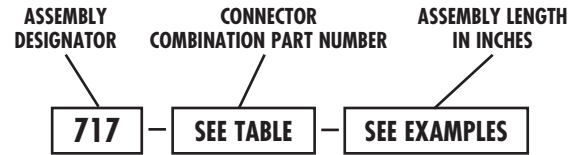
## CONNECTOR COMBINATION PART NUMBERS\*

	50 GHz		50 GHz						
	4-Position Male (Storm Flex® 047)	4-Position Female (Storm Flex® 047)	4-Position Male (Storm Flex® 086)	4-Position Female (Storm Flex® 086)	8-Position Male (Storm Flex® 047)	8-Position Female (Storm Flex® 047)	8-Position Male (Storm Flex® 086)	8-Position Female (Storm Flex® 086)	
50 GHz	2.4mm SP	4087	4086	4083	4082	4085	4084	4081	4080
	4-Position Male	8787	8687	8383	8283	-	-	-	-
	4-Position Female	8687	8686	8283	8282	-	-	-	-
40 GHz	8-Position Male	-	-	-	-	8585	8485	8181	8081
	8-Position Female	-	-	-	-	8485	8484	8081	8080
26.5 GHz	2.9mm SP	3787	3786	3783	3782	3785	3784	3781	3780
	SMP SJ	2187	2186	2183	2182	2185	2184	2181	2180
18 GHz	SMA SP	0387	0386	0383	0382	0385	0384	0381	0380
	SSMA SP	3087	3086	3083	3082	3085	3084	3081	3080
18 GHz	SMA SP	0287	0286	0283	0282	0285	0284	0281	0280
	SMA SJ	0487	0486	0483	0482	0485	0484	0481	0480
18 GHz	SMP SJ	0687	0686	0683	0682	0685	0684	0681	0680

NOTE: All non-8-position connectors will order x4 or x8.  
\* Other connector styles available; consult Storm

## ORDERING INFORMATION: Part Number Designation

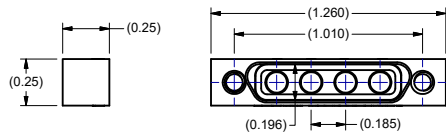
CONNECTOR CODES	
SP	Straight Plug
SJ	Straight Jack



### EXAMPLES:

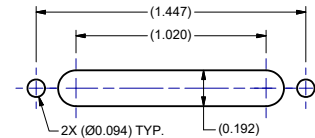
717-4080-009 = Mini-MultiMate® assembly with Storm Flex® 086 cables, [8] 2.4 mm SP connectors to 8-position female connector (assembly operates to 50 GHz), **9 inches**

717-3087-018 = Mini-MultiMate® assembly with Storm Flex® 047 cables, [4] SSMA SP connectors to 4-position male connector (assembly operates to 26.5 GHz), **18 inches**



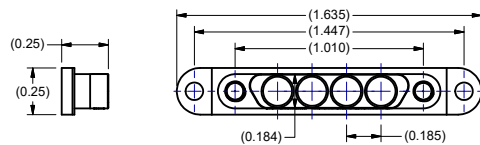
**4-POSITION PLUG HOUSING**

P/N: 050-3403-001



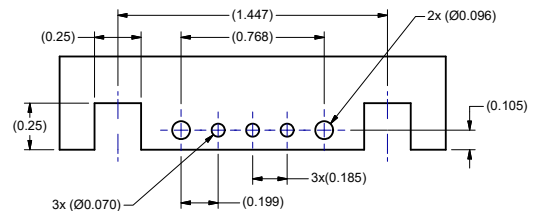
**4-POSITION PANEL CUTOUT**

Panel Thickness: 1/32" - 3/32"



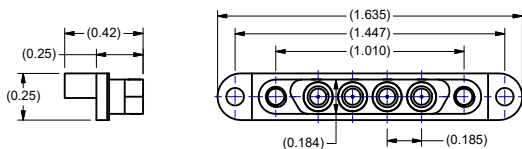
**4-POSITION PANEL MOUNT RECEPTACLE**

P/N: 050-3548-001



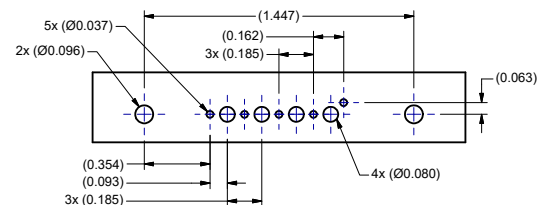
**4-POSITION PCB BOARD LAUNCH PAD (Edge Launch)**

For complete recommended board specifications, see TSM DWG 710-0702



**4-POSITION PCB MOUNT RECEPTACLE (Edge Launch)**

P/N: 050-3399-001



**4-POSITION PCB BOARD LAUNCH PAD (Vertical Launch)**

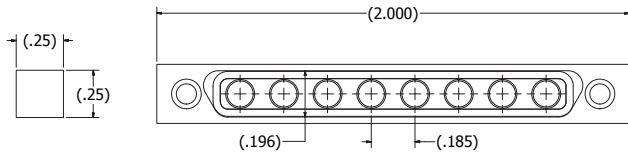
For complete recommended board specifications, see TSM DWG 710-0703

NOTE: All dimensions are in inches.

# MINI-MULTIMATE®

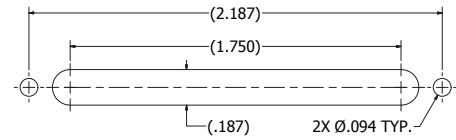
## 4 & 8 POSITION

# HIGH FREQUENCY MULTIPLE INTERCONNECT SYSTEM



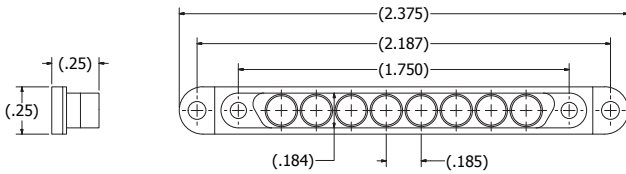
**8-POSITION PLUG HOUSING**

P/N: 050-3054-001



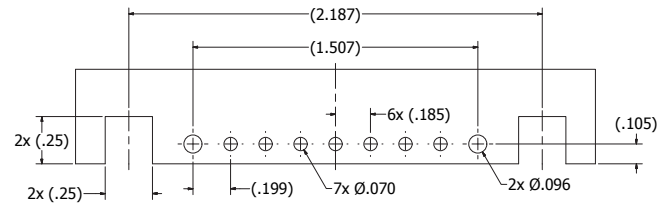
**8-POSITION PANEL CUTOUT**

Panel Thickness: 1/32" – 3/32"



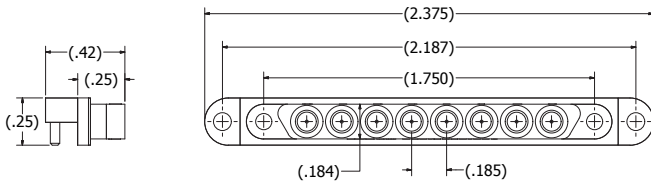
**8-POSITION PANEL MOUNT RECEPTACLE**

P/N: 050-3055-001



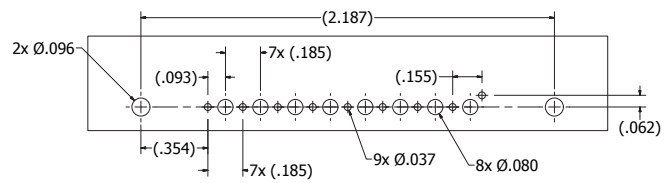
**8-POSITION PCB BOARD LAUNCH PAD (Edge Launch)**

For complete recommended board specifications, see TSM DWG 710-0605



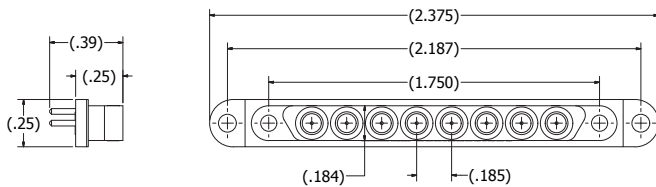
**8-POSITION PCB MOUNT RECEPTACLE (Edge Launch)**

P/N: 050-3251-001



**8-POSITION PCB BOARD LAUNCH PAD (Vertical Launch)**

For complete recommended board specifications, see TSM DWG 710-0626



**8-POSITION PCB MOUNT RECEPTACLE (Vertical Launch)**

P/N: 050-3290-001

**NOTE: All dimensions are in inches.**

### Supplemental Materials



#### Spare Cable Assemblies

Storm Flex® 047 and  
Storm Flex® 086 cables



#### Contact release tool for use with Mini-MultiMate® Female

P/N: 520-3303-003



AS9100/ISO 9001 REGISTERED

10221 Werch Drive  
Woodridge, Illinois 60517

[www.teledynestorm.com](http://www.teledynestorm.com)

Tel 630.754.3300  
Fax 630.754.3500  
Toll Free 888.347.8676  
[storm\\_microwave@teledyne.com](mailto:storm_microwave@teledyne.com)

PR1-0016 Rev A