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# PHASE MICRO®

# TEST CORE®

MICROWAVE TEST CABLE ASSEMBLIES COVERING UP TO 50GHZ

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MICROWAVE TEST CABLE ASSEMBLIES



**OSI's PHASE MICRO** Microwave Test Cable Assemblies are designed to offer optimal, durable, precision test & measurement interconnect solution where in application requires reliability and stability are a key factor covering up to 50GHz.

Longer life time with consistency of performance, which results in more return in total cost of

ownership, most of users indicate.

Excellent electrical performance comes from **PHASE MICRO**'s unique cable construction with optimum RF connector design available in 2.4mm 2.92mm and 3.5mm connections.

## Advantage of PHASE MICRO

- Rugged cable construction maximizes physical endurance limit where crushing, compression, kinking and repeatable flex cycles are in continuous use.
- Extremely low loss in attenuation and VSWR guarantee dependable performance.



- Increased Phase stability in frequent flex cycles and over broad range of temperature offer precision test & measurement.
- Enhanced Amplitude Stability provides longer calibration interval.

## Your Guaranteed Quality

All **PHASE MICRO** cable assemblies are fully tested and inspected prior to releasing to customers and OSI offers a warranty program within range of warranty policy for guaranteed quality. Materials and fabrication process are in progress under tight quality assurance program.

ROHS compliant. Stock assemblies in length of 0.6m and 1.0m are available for short lead time.

# PHASE MICRO specifications up to 50Ghz

Available Interfaces:

• 2.4mm, 2.92mm, 3.5mm

Specification	E13M	E14M	E20	
Operating Frequency	DC ~ 50Ghz	DC~26.5GHz		
Maximum VSWR	1.30:1	1.25:1	1.25:1	
Impedance (Nominal)		50 Ohms		
Amplitude Stability in Insertion Loss		< ± 0.05dB		
Phase Stability vs Temperture	6°	3°	2°	
Attenuation at Max Frequency	-3.8dB	-2.9dB	-1.6dB	
Velocity of Propagation	77%	83%	83%	
Shield Effectiveness (Through 18Ghz)		<100 dB		
Time Delay (Nominal) ns/cm	4.25	3.95	3.95	
Temperature Ranges (°c)		-55° ~ +150°		
Minimum Bend Radius	18MM	20MM	28mm	
Crush Resistance (kg-f/cm)		41.2		



<sup>\*</sup> Data obtained from 1m of E14M PHASE MICRO

### **PHASE MICRO** Key Features

- Amplitude Stability in insertion loss up to  $\pm 0.03 \text{ dB}$
- Phase Stability of 3° at Maximum Covering Frequency
- Ruggedizied Construction provides excellent electrical performance against crushing, compression, kinking, repeatable flex cycles, temperature up to 150°C



\* Contact sales for further data requirement.

- Excellent solution for VNA Test under harsh environment at precision measurement is in demand.
- Semiconductor On-Wafer Test Application where electrical stability is a key requirement.

# **TEST CORE**<sup>®</sup>

MICROWAVE TEST CABLE ASSEMBLIES

**OSI**'s **TEST CORE** Microwave Test Cable Assemblies are designed to offer optimal, durable, precision test & measurement interconnect solution where in application requires limited space requirement with maintainable cost of ownership are a key factor covering upto 50GHz.



Slimmer interconnect construction available in 2.4mm, 2.92mm, 3.5mm, SMA, N with lower VSWR and consistent amplitude stability provide convenient use in multi-ports environment, most of users indicate.



#### Advantage of **TEST CORE**

- Slimmer interconnect construction maximizes ease of use in where multiports with space limitation is challenging.
- Maximized Flexible Cable Construction for continuous flex cycles while stability is still maintained.
- 5G Test and Interconnection with Beam Forming antenna and repeater

# Your Guaranteed Quality

All **TEST CORE** cable assemblies are fully tested and inspected prior to releasing to customers and OSI offers a warranty program within range of warranty policy for guaranteed quality. Materials and fabrication process are in progress under tight quality assurance program.

ROHS compliant. Stock assemblies in length of 0.6m and 1.0m are available for next day shipment

## **TEST CORE** Specifications up to 50Ghz

Available connectors :

• 2.4mm, 2.92mm, 3.5mm, SMA, N

Specification	LH18	LH21D	LH16D	LH13D	E14	E31	
Operating Frequency	DC~8.5GHz	DC~26.5GHz	DC~40GHz	DC ~ 50Ghz	DC ~ 40Ghz	DC~26.5GHz	
Maximum VSWR		1.25:1	1.25:1				
Impedance (Nominal)	50 Ohms						
Amplitude Stability							
in Insertion Loss	< ± 0.100 Max , ±0.050B Typical						
Phase Stability	30	20	60	Qo	30	20	
vs Temperture				0		۷	
Attenuation	_1 10dB		-3 24B	-3 84B	-2 0dB	-0.7dB	
at Max Frequency	-1.100D	-1.050D	-5.200	-5.000	-2.90D	-0.70D	
Velocity of Propagation	76%	76%	76%	76%	83%	83%	
Shield Effectiveness	2 DO 2						
(dB through 18Ghz)	> -300B						
Time Delay	4.25 2.05						
(Nominal) ns/cm		4.2	3.95				
Temperature Ranges (°c)	-55° ~ +100°				-55° ~ +150°		
Minimum Bend Radius	20mm	28mm	20mm	18MM	20MM	36mm	



\* Data obtained from 1m of E14 TEST CORE

## **TEST CORE** Key Features

- Amplitude Stability in insertion loss up to -0.1dB
- Phase Stability of 6° at the maximum covering frequency



\* Contact sales for further data requirement.

Economical Solution

• Provides ease of routing in tight space constraint while it reduces stress on interconnection ports and DUT



# Part Number Configuration

Start with cable types :

PHASE MICRO (Armor Type) TEST CORE (Slimmer & Double Jacket)

- P35 E13M 50GHz
- P35 E14m 40GHz
- P35 E20 26.5GHz
- TC LH13D- 50GHz
   TC LH16D 40GHz
- TC E14 40GHz
- TC LH21D 26.5GHz
- TC E31 18GHz
- TC LH18 8.5GHz





Length is expressed in metric or inches for any customized length.



See chart below for list of Interfaces

that are available for each ends

Interface Table

CABLE TYPE		2.4mm Male	2.4mm Female	2.92mm Male	2.92mm Female	3.5mm Male	3.5mm Female	SMA Male	SMA Female	N Male	N Female
PHASE MICRO	P35 E13M (DC~50GHz)	<b>2M</b>	2F								
	<b>РЭ5 ЕІЧМ</b> (DC~40GHz)			КМ	KF						
	P35 E20 (DC~26.5GHz)					ЭМ	ЭF			NM	
TEST CORE	TC LHI3D (DC~50GHz)	2M	2F								
	TC E14 (DC~40GHz)	<b>2M</b>	2F	KM	KF						
	TC LH16D (DC~40GHz)	<b>2M</b>	2F	KM	KF			SM	SF		
	TC LH21D (DC~26.5GHz)							SM	SF	NM	NF
	TC E31 (DC~18GHz)							SM	SF	NM	
	TC LH18 (DC~8.5GHz)							SM	SF	NM	NF

### Example :

• TC LH21D SMNM-1.0m = 1 meter long LH21D with SMA Male to N Male covering up to 18GHz



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