

OSI

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OSI

PHASE MICRO[®]

TEST CORE[®]

LH (Low Loss High Power)

**MICROWAVE TEST CABLE ASSEMBLIES
COVERING UP TO 40GHZ**

PHASE MICRO[®]

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 IS A KEY FACTOR. 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 3.5MM AND 2.92MM CONNECTIONS.

ADVANTAGE OF PHASE MICRO

- RUGGED CABLE CONSTRUCTION MAXIMIZES PHYSICAL ENDURANCE LIMIT WHERE CRUSHING, COMPRESSION, KINKING AND REPEATABLE FLEX CYCLES ARE IN CONTINUOUS USE.
- EXTREME 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.

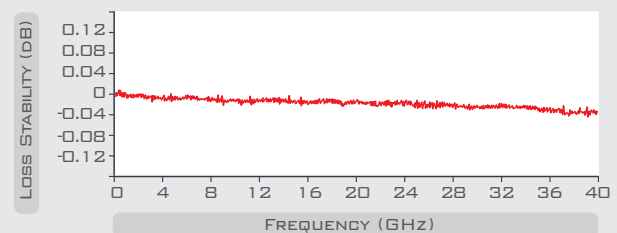
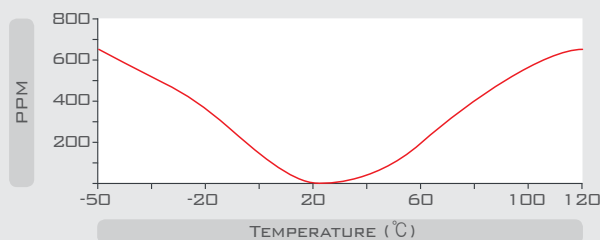
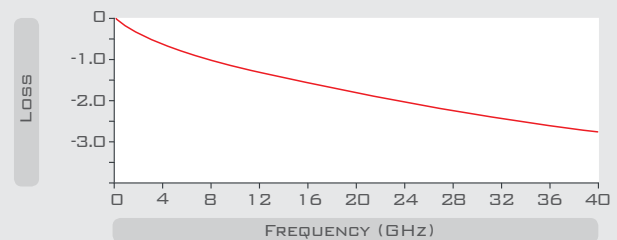
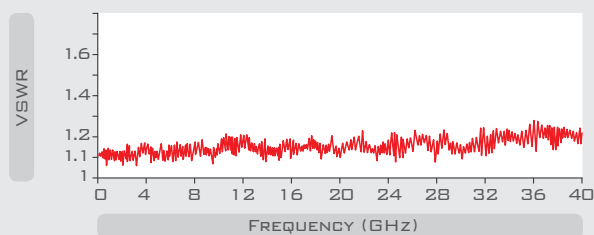
ROHS COMPLIANT. STOCK ASSEMBLIES IN LENGTH OF 0.6M AND 1.0M ARE AVAILABLE FOR NEXT DAY SHIPMENT

PHASE MICRO SPECIFICATIONS UP TO 40GHZ

AVAILABLE CONNECTORS :

- 2.92MM MALE AND FEMALE
- 3.5MM MALE AND FEMALE

OPERATING FREQUENCY	DC ~ 40GHZ
MAXIMUM VSWR	1.25:1 / TYPICAL 1.20:1
IMPEDANCE (NOMINAL)	50 OHMS
AMPLITUDE STABILITY IN INSERTION LOSS	< +/- 0.05dB / TYPICAL +/- 0.03dB
DIELECTRIC CONSTANT	1.4
VELOCITY OF PROPAGATION	83%
SHIELD EFFECTIVENESS (DB THROUGH 18GHZ)	<100
TIME DELAY (NOMINAL) NS/CM	0.04
TYPICAL FLEX CYCLES	10,000
TEMPERATURE RANGES (°C)	-55° ~ +125°
MINIMUM BEND RADIUS	20MM
CRUSH RESISTANCE (KG-F/CM)	41.2



* DATA OBTAINED FROM P35KMKF-1.0M (1M OF **PHASE MICRO** WITH 2.92MM MALE TO FEMALE)

PHASE MICRO KEY FEATURES

- UNIQUE RUGGEDIZED CABLE CONSTRUCTION RESISTS FROM ABRASION, KINKING, COMPRESSION AND CONTINUOUS FLEX CYCLE WHILE ASSURING HIGHER FLEXIBILITY PROVIDES LONGER LIFE TIME.
- VELOCITY OF PROPAGATION : 83%
- LOW INSERTION LOSS : MINIMUM -2.6DB/M @ 40GHZ
- MAXIMUM VSWR : 1.25:1 / TYPICAL 1.20:1
- PHASE STABLE OVER TEMPERATURE : 500PPM @ -30 ~ +80
- PHASE STABLE VS. FLEXURE +/- 5 DEGREE
- AMPLITUDE STABILITY: < +/- TYPICAL 0.05DB
- PHASE MATCHING OPTION AVAILABLE BOTH IN RELATIVE AND ABSOLUTE MATCH

TEST CORE[®]

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.



SLIMMER INTERCONNECT CONSTRUCTION AVAILABLE IN 3.5MM AND 2.92MM 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 MULTI-PORTS WITH SPACE LIMITATION IS CHALLENGING.
- EXTREME LOW LOSS IN ATTENUATION, RETURN LOSS AND ELECTRICAL STABILITY WITH MAINTAINABLE COST OF OWNERSHIP GUARANTEE CUSTOMER'S SATISFACTION.

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.

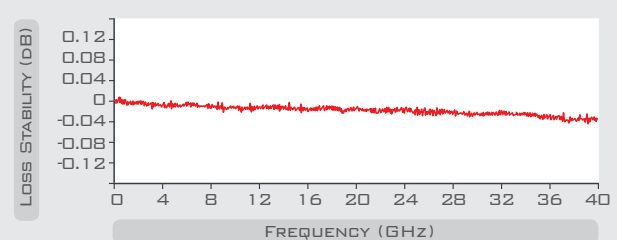
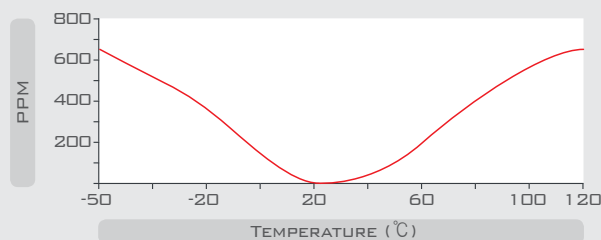
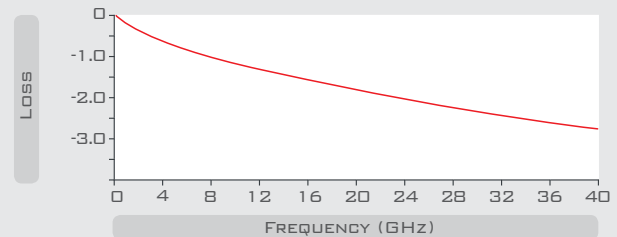
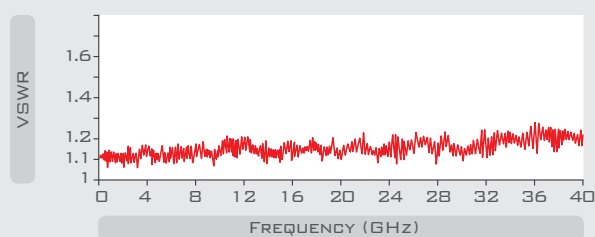
ROHS COMPLIANT. STOCK ASSEMBLIES IN LENGTH OF 0.6M AND 1.0M ARE AVAILABLE FOR NEXT DAY SHIPMENT

TEST CORE SPECIFICATIONS UP TO 40GHZ

AVAILABLE CONNECTORS :

- 2.92MM MALE
- 3.5MM MALE

MAXIMUM FREQUENCY	DC ~ 40GHZ
TYPICAL VSWR	1.25:1
IMPEDANCE (NOMINAL) (OHMS)	50
AMPLITUDE STABILITY IN INSERTION LOSS	< +/- 0.05dB
DIELECTRIC CONSTANT	1.4
VELOCITY OF PROPAGATION	83%
SHIELD EFFECTIVENESS (DB THROUGH 18GHZ)	>100
TIME DELAY (NOMINAL) NS/CM	0.04
TEMPERATURE RANGES (°C)	- 55° ~ +125°
MINIMUM BEND RADIUS	20MM



* DATA OBTAINED FROM T17KMKM-1.0M (1M TEST CORE WITH 2.92MM MALE TO MALE)

TEST CORE KEY FEATURES

- SLIMMER INTERCONNECT CONSTRUCTION IN 3.5MM AND 2.92MM CONNECTIONS
- VELOCITY OF PROPAGATION : 83%
- LOW INSERTION LOSS: MINIMUM -2.9DB/M @ 40GHZ
- MAXIMUM VSWR : 1.25:1
- PHASE STABLE OVER TEMPERATURE : 500PPM @ -30 ~ +80
- PHASE STABLE VS. FLEXURE : +/- 5 DEGREE
- AMPLITUDE STABILITY : TYPICALLY BELOW 0.1 DB
- PHASE MATCHING OPTION AVAILABLE BOTH IN RELATIVE AND ABSOLUTE MATCH

LH (Low Loss High Power)

MICROWAVE TEST CABLE ASSEMBLIES

OSI's Low Loss High Power MICROWAVE TEST CABLE ASSEMBLIES ARE DESIGNED TO OFFER OPTIMAL, DURABLE, PRECISION TEST & MEASUREMENT INTERCONNECT SOLUTION UP TO 18GHZ WHERE IN APPLICATION REQUIRES LOWER LOSS WITH HIGHER POWER REQUIREMENT WITH STABLE ELECTRICAL PERFORMANCE ARE A KEY FACTOR.

INTERCONNECT SOLUTIONS ARE AVAILABLE IN MALE TYPES OF 3.5MM, SMA AND N CONNECTIONS WITH LOWER LOSS AND HANDLING HIGHER POWER COVER UP TO 18GHZ WHILE GUARANTEED ELECTRICAL PERFORMANCES.



ADVANTAGE OF LH

- RECOMMENDED WHERE REQUIRING LOWER ATTENUATION IN HIGHER POWER APPLICATION UP TO 18GHZ.
- MAXIMUM VSWR 1.25 OR BELOW WITH STABILITY OF AMPLITUDE AND PHASE ARE GUARANTEED WHILE FREQUENT FLEXURE AND BROAD RANGE OF TEMPERATURE CYCLE ENVIRONMENT.
- MAINTAINABLE COST OF OWNERSHIP GUARANTEES CUSTOMER'S SATISFACTION.

YOUR GUARANTEED QUALITY

ALL **Low Loss High Power** 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 1.0M ARE AVAILABLE FOR NEXT DAY SHIPMENT.

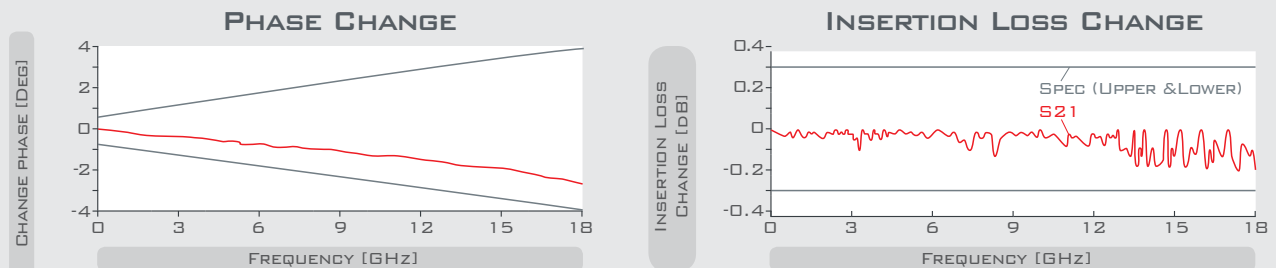
LH SPECIFICATIONS UP TO 18GHZ

AVAILABLE CONNECTORS FOR LH21 AND LH31

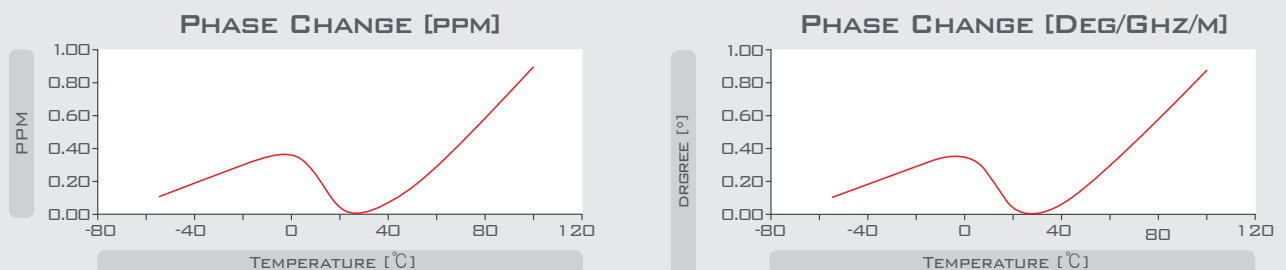
- 3.5MM MALE, SMA MALE, N MALE

MAXIMUM FREQUENCY (GHZ)	DC ~ 18GHZ
TYPICAL VSWR	1.25:1
IMPEDANCE (NOMINAL) (OHMS)	50
AMPLITUDE STABILITY IN INSERTION LOSS	< +/- 0.05dB
DIELECTRIC CONSTANT	1.7
VELOCITY OF PROPAGATION	76% (LH21) / 83% (LH31)
SHIELD EFFECTIVENESS (DB THROUGH 18GHZ)	<100
TIME DELAY (NOMINAL) NS/CM	0.04
TEMPERATURE RANGES (°C)	-55° ~ +125°
MINIMUM BEND RADIUS (MM)	30MM (LH21) / 40MM (LH31)

PHASE STABILITY AND INSERTION LOSS VS. FLEXURE



* DATA OBTAINED FROM LH21 SMSM-1.0M (1M LH21 CABLE ASSEMBLY WITH SMA MALE TO MALE)



* DATA OBTAINED FROM LH31 SMSM-1.0M (1M LH31 CABLE ASSEMBLY WITH SMA MALE TO MALE)

LH SERIES KEY FEATURES

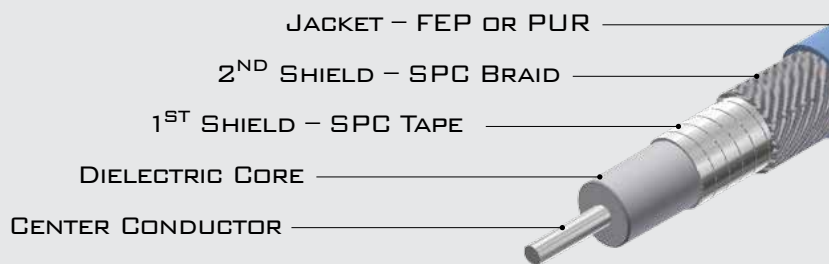
- LOWER LOSS WITH HIGHER POWER
- VELOCITY OF PROPAGATION : 76%
- INSERTION LOSS @ 18GHZ
 - LH21 □ MINIMUM -1.60 DB/M (REFER TO BULK CABLE LH21 FOR FURTHER LOSS INFORMATION)
 - LH31 □ MINIMUM -0.98 DB/M (REFER TO BULK CABLE LH31 FOR FURTHER LOSS INFORMATION)
- MAXIMUM VSWR : 1.25:1
- POWER HANDLING (W) AMBIENT (SEA LEVEL) @ 18GHZ
 - LH21 □ 235W (REFER TO BULK CABLE LH21 FOR FURTHER POWER INFORMATION)
 - LH31 □ 380W (REFER TO BULK CABLE LH31 FOR FURTHER POWER INFORMATION)
- PHASE STABLE VS. FLEXURE : +/- 3 DEGREE @ 18GHZ
- AMPLITUDE STABILITY : < +/- TYPICAL BELOW 0.1 DB @18GHZ

Bulk Microwave Cable

DC TO 40GHZ

FEATURES AND ADVANTAGES

LOW DENSITY EPTFE TAPE DIELECTRIC ALLOWS TO OBTAIN VELOCITY OF PROPAGATION UP TO 83%. SPC (SILVER PLATED COPPER) TAPE AND BRAIDS WILL INCREASE SHIELDING EFFECTIVENESS. FEP JACKET ALLOWS CHEMICAL RESISTANCE AND PROTECTS FROM ENVIRONMENT.



PHYSICAL & ENVIRONMENTAL (MECHANICAL UNITS ARE IN MM)

SPECIFICATIONS	E14	LH31	LH21
SOLID CENTER CONDUCTOR	0.93	2.3	1.4
DIELECTRIC CORE	2.5	6.3	4.10
OUTER SHIELD (2ND)	3.1	7.25	4.70
OUTER DIAMETER	3.6	7.9	5.6 ±0.1
IMPEDANCE (OHM)	50 ±1 OHM	50 ±1 OHM	50 ±1 OHM
VELOCITY OF PROPAGATION	83% NOM.	83% NOM.	76% NOM.
BENDING RADIUS	18MM	35MM	30MM
RF LEAKAGE	< -100	< -100	< -100
OPERATING TEMP (°C)	-45~+125	-45~+125	-45~+125
JACKETING	GREY FEP	GREY FEP	BLACK FEP
PHASE STABILITY VS. FLEXURE (@ 18GHZ MAX)	±3.6°	±5.0°	±5.0°
AMPLITUDE STABILITY	±0.15DB MAX	±0.15DB MAX	±0.15DB MAX

ATTENUATION (DB/M) & POWER HANDLING (W) @ + 25°C (SEA LEVEL)

FREQUENCY (GHZ)	E14		LH31		LH21	
1	0.36 DB/M	625 W	0.15 DB/M	1600 W	0.08 DB/M	1025 W
6	0.86 DB/M	255 W	0.37 DB/M	650 W	0.20 DB/M	416 W
10	1.10 DB/M	198 W	0.49 DB/M	550 W	0.27 DB/M	318 W
18	1.58 DB/M	145 W	0.68 DB/M	380 W	0.38 DB/M	235 W
26.5	2.09 DB/M	115 W	-	-	0.47 DB/M	175 W
40	2.64 DB/M	85 W	-	-	-	-

How to Order

PART NUMBER CONFIGURATION

START WITH CABLE TYPES :

Phase Micro P35

Test Core T17

Low Loss High Power LH21 OR LH31

LENGTH IS EXPRESSED IN METRIC OR INCHES FOR ANY CUSTOMIZED LENGTH.



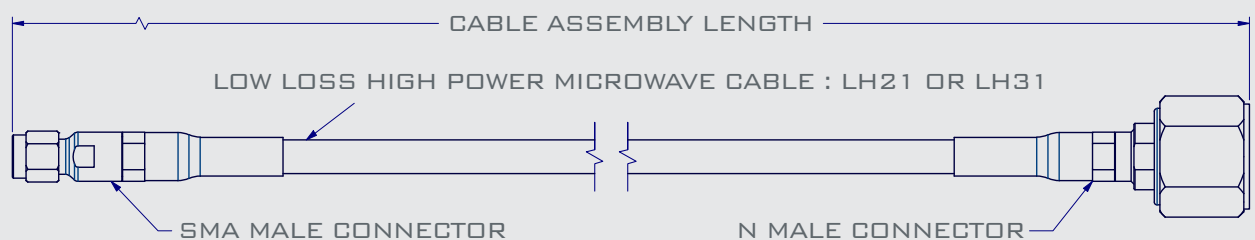
SEE CHART BELOW FOR LIST OF CONNECTORS THAT ARE AVAILABLE FOR EACH ENDS

CONNECTOR OPTION

PHASE MICRO P35	TEST CORE T17	LH21 LH31
<ul style="list-style-type: none"> • KM (2.92MM MALE) • KF (2.92MM FEMALE) • 3M (3.5MM MALE) • 3F (3.5MM FEMALE) 	<ul style="list-style-type: none"> • KM (2.92MM MALE) • KF (2.92MM FEMALE) • 3M (3.5MM MALE) • 3F (3.5MM FEMALE) 	<ul style="list-style-type: none"> • 3.5MM MALE • N MALE • SMA MALE

EXAMPLE :

- T17KF3M-36 = **TEST CORE** WITH 2.92MM FEMALE TO 3.5MM MALE FOR 36 INCHES LONG
- LH21SMNM-1.0M = LH21 WITH SMA MALE TO N MALE FOR 1 METER LONG COVERING UP TO 18GHZ





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