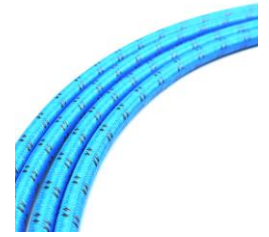


MVE Low Loss Flexible 26.5GHz Coax Test Cable

MCBL-LL264P.50



Features:

- FREQUENCY: 26.5GHz
- High Flexibility
- Phase & Loss Stable
- High Matching Cycles, Stainless Steel Connectors
- ROHS compliant

Applications:

- RF & Microwave Test and Calibration
- Research and Development Labs
- Interconnect RF Equipment in Narrow Environment
- Military / Commercial Communication Systems Interconnect

Specifications

| CONSTRUCTION | | |
|-----------------|----------------------------|----------------------|
| ITEM | MATERIAL | DIAMETER |
| INNER CONDUCTOR | Silver Plated Copper | 0.72 ±0.02mm |
| DIELECTRIC | PTFE | 2.21mm |
| OUTER CONDUCTOR | Silver-plated Copper Foil | 2.38mm (2.45mm Max.) |
| INNER TAPE | PTFE | 2.68mm |
| OUTER SHIELDING | Round Silver-plated Copper | 3.14mm (3.25mm Max.) |
| JACKET | FEP (Blue) | 3.60±0.1mm |
| ARMOR | STAINLESS STEEL PTFE | 6.1±0.1mm |

| ELECTRICAL DATA | |
|--------------------------|------------------------------------|
| ITEM | SPECIFICATION |
| FREQUENCY | 26.5GHz |
| CHARACTERISTIC IMPEDANCE | 50 Ohm |
| BEND RADIUS(mm) | 14 mm MIN./ 36mm MIN. (Repetition) |
| OPERATING TEMP | -55°C~ +165°C |
| SHIELDING EFFECTIVENESS | Typically <-90 dB |
| WORKING VOLTAGE | 1000V RMS Max. |
| VELOCITY OF PROPAGATION | 74.0 % |
| WEIGHT(g/m) | 34 |

TYP. ATTENUATION(25°C) and TYP. AVG. POWER (40°C)

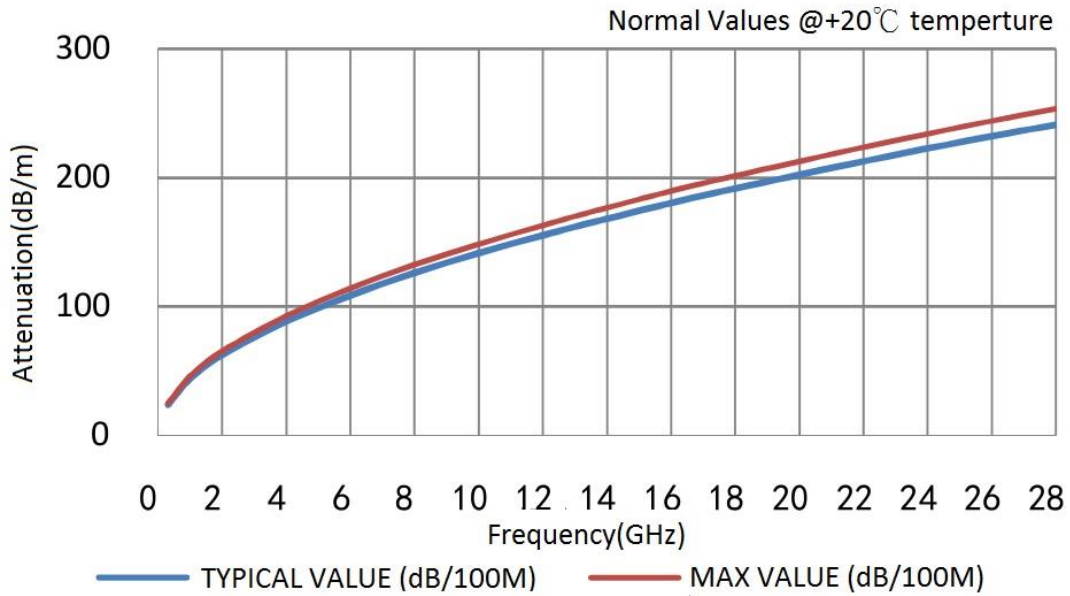
| Freq.(GHz) | 0.3 | 1 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 18 | 26.5 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| dB/100m | 23.9 | 43.8 | 62.2 | 88.5 | 108.8 | 126.1 | 141.5 | 155.4 | 168.3 | 191.8 | 234.8 |
| Power kW | 0.750 | 0.409 | 0.288 | 0.202 | 0.165 | 0.142 | 0.127 | 0.115 | 0.106 | 0.093 | 0.076 |

$$K1 = 1.3707349$$

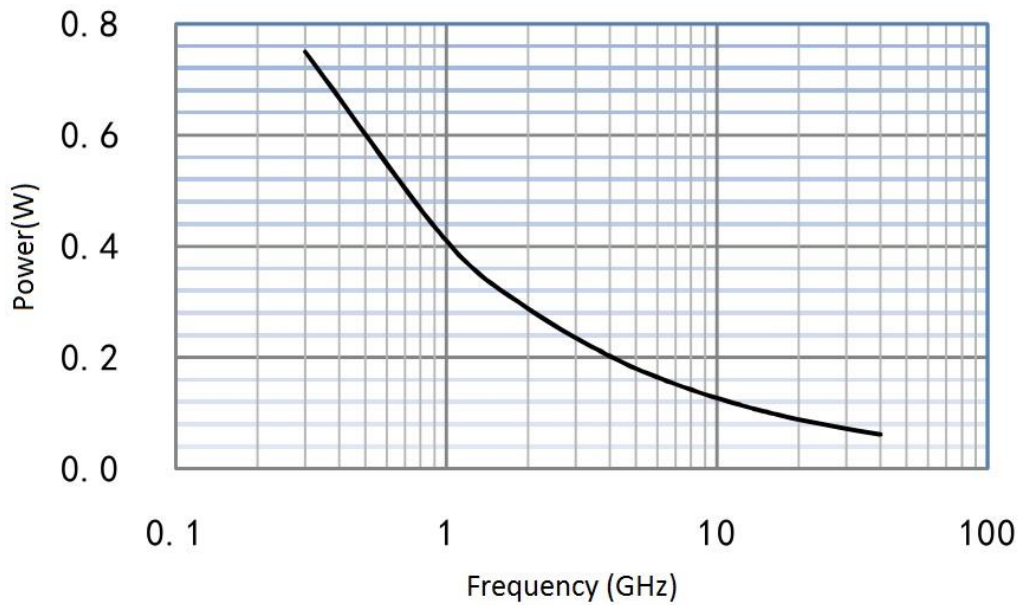
$$K2 = 0.0004400$$

$$\text{Equation} = K1 \cdot \sqrt{\text{FMHz}} + K2 \cdot \text{FMHz}$$

Cable Attenuation



Average Power



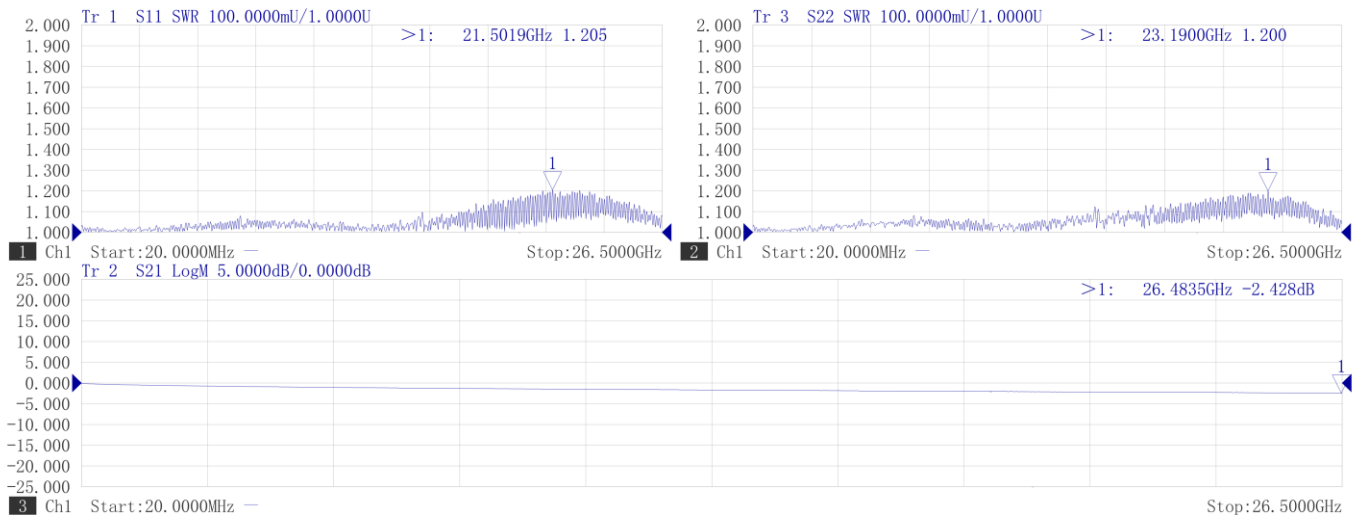


Cable Assembly Part Number

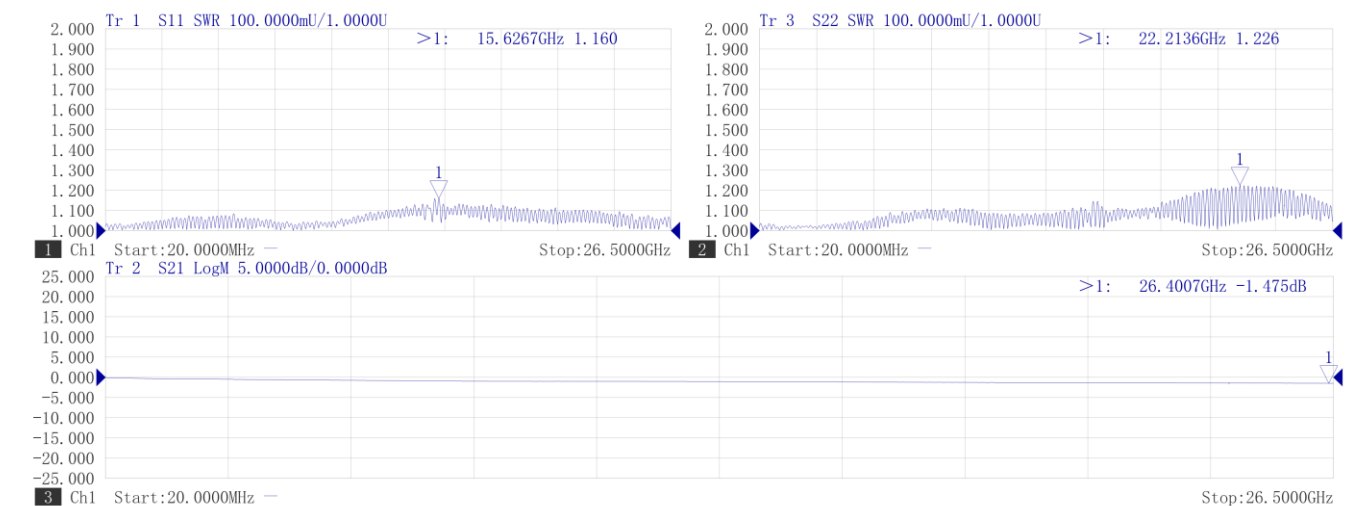
| MVE PART NUMBER | CONNECTOR 1 | CONNECTOR 2 | LENGTH (cm) | FREQUENCY (GHz) | VSWR |
|-------------------|-------------|--------------|-------------------------|-----------------|------|
| 140140.LL264P.XX | 2.92mm Male | 2.92mm Male | 15, 30, 50, 60, 90, 100 | 26.5 | 1.25 |
| 160160.LL264P1.XX | 3.5mm Male | 3.5mm Male | 15, 30, 50, 60, 90, 100 | 26.5 | 1.30 |
| 160170.LL264P1.XX | 3.5mm Male | 3.5mm Female | 15, 30, 50, 60, 90, 100 | 26.5 | 1.30 |
| 260280.LL264P.XX | N Male | SMA Male | 15, 30, 50, 60, 90, 100 | 18.0 | 1.30 |
| 280280.LL264P.XX | SMA Male | SMA Male | 15, 30, 50, 60, 90, 100 | 26.5 | 1.30 |
| 280280.LL264P1.XX | SMA Male | SMA Male | 15, 30, 50, 60, 90, 100 | 26.5 | 1.30 |
| 280290.LL264P.XX | SMA Male | SMA Male | 15, 30, 50, 60, 90, 100 | 26.5 | 1.35 |

Typical Test Result

| PART NUMBER | DESCRIPTION |
|-------------------|---|
| 280280.LL264P.100 | SMA Male/Stainless To SMA Male/Stainless, DC-26.5GHz LL264 Low Loss, Phase Stable Cable /L:100cm, VSWR<1.3,IL<2.8 |



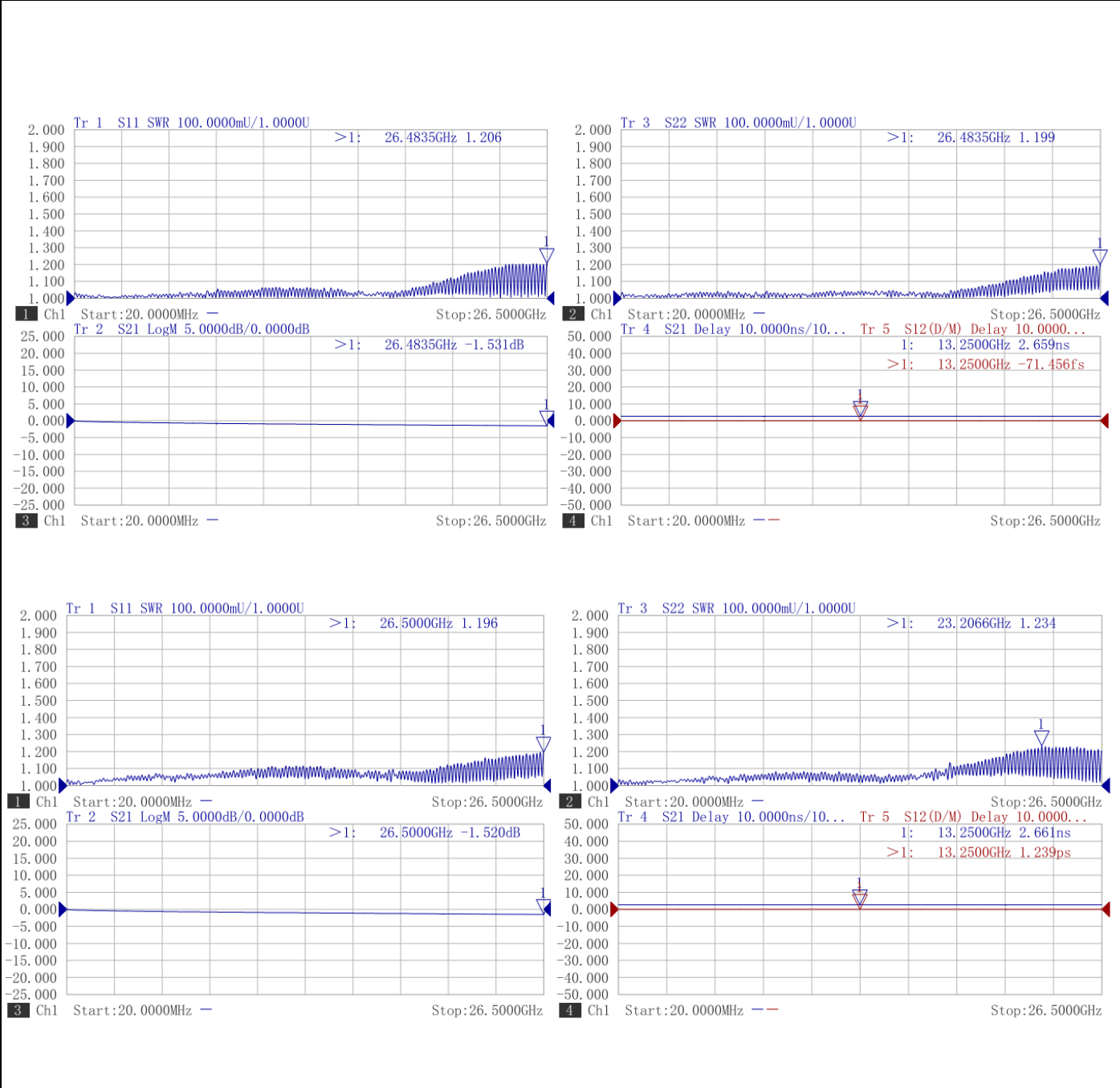
| PART NUMBER | DESCRIPTION |
|------------------|--|
| 280280.LL264P.60 | SMA Male/Stainless To SMA Male/Stainless, DC-26.5GHz LL264P Low Loss, Phase Stable Cable /L:60cm, VSWR<1.3,IL<1.83 |



NOTES:

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2. CUSTOMER OUTLINE DRAWING FOR REFERENCE ONLY



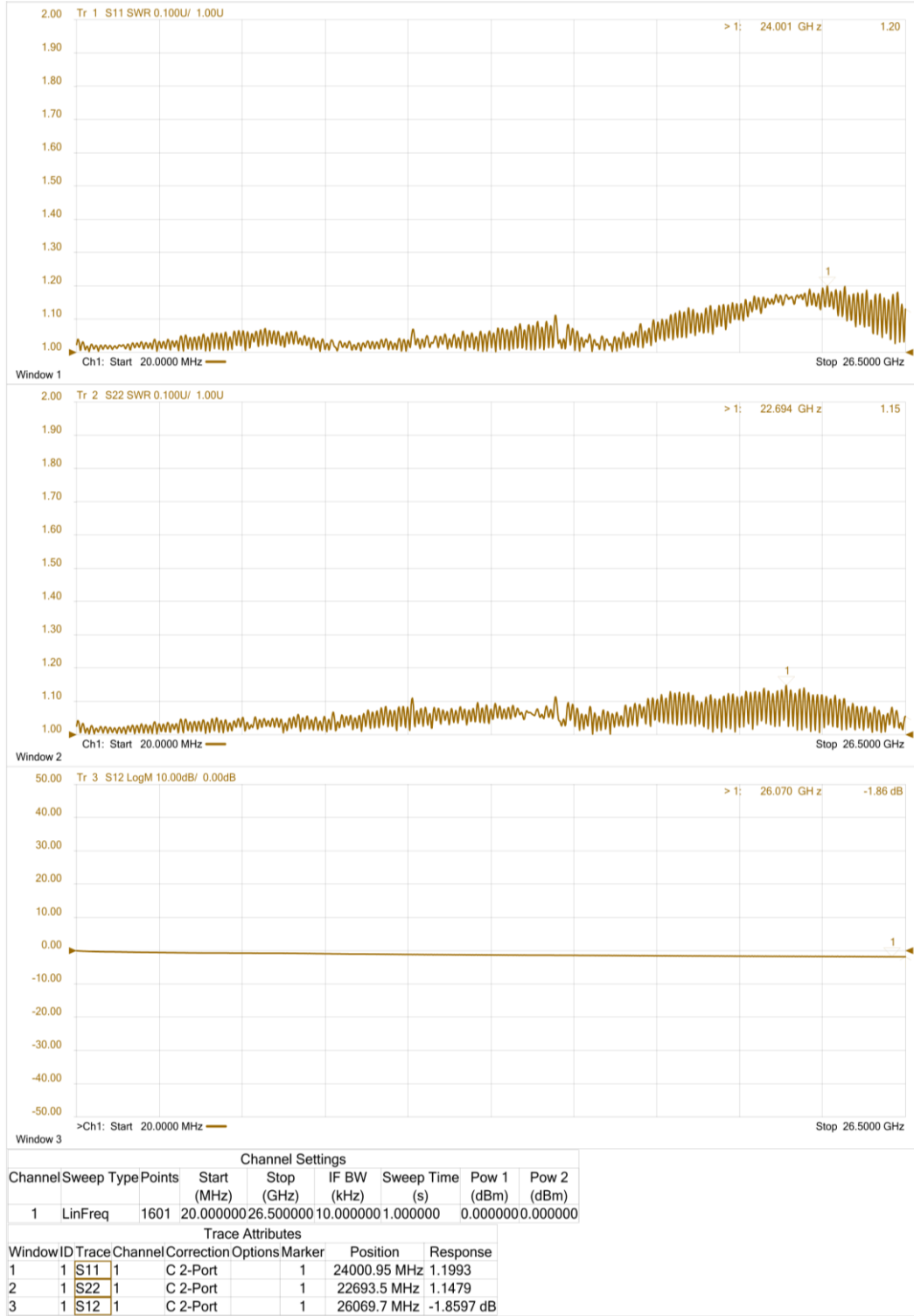
| PART NUMBER | DESCRIPTION |
|--|---|
| 160160.LL264P1.60 | 3.5mm Male To 3.5mm Male, DC-26.5GHz LL264P Cable(Phase±4.5°, Delay<2ps, Loss stability±0.1dB)/VSWR<1.3,I.L.<1.9dB/L:60cm |
|  <p>The figure contains four plots arranged in a 2x2 grid, showing the performance of the cable across a frequency range from 20.0000MHz to 26.5000GHz.</p> <ul style="list-style-type: none"> Top-Left Plot: SWR (Tr 1) vs Frequency. Title: Tr 1 S11 SWR 100.0000mU/1.0000U. Data point: >1: 26.4835GHz 1.206. Top-Right Plot: SWR (Tr 3) vs Frequency. Title: Tr 3 S22 SWR 100.0000mU/1.0000U. Data point: >1: 26.4835GHz 1.199. Bottom-Left Plot: LogM (Tr 2) vs Frequency. Title: Tr 2 S21 LogM 5.0000dB/0.0000dB. Data point: >1: 26.4835GHz -1.531dB. Bottom-Right Plot: Delay (Tr 4) vs Frequency. Title: Tr 4 S21 Delay 10.0000ns/10.0000ns. Data points: 1: 13.2500GHz 2.659ns; >1: 13.2500GHz -71.456fs. <p>Each plot also includes a title for the bottom row (Tr 5) showing S12(D/M) Delay 10.0000ns/10.0000ns. Data points for Tr 5: 1: 13.2500GHz 2.661ns; >1: 13.2500GHz 1.239ps.</p> | |

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| PART NUMBER | DESCRIPTION |
|------------------|---|
| 280290.LL264P.80 | SMA Male/Stainless To SMA Female/Stainless, DC-26.5GHz LL264P Low Loss, Phase Stable Cable /L80cm, VSWR<1.35,IL<2.4dB |

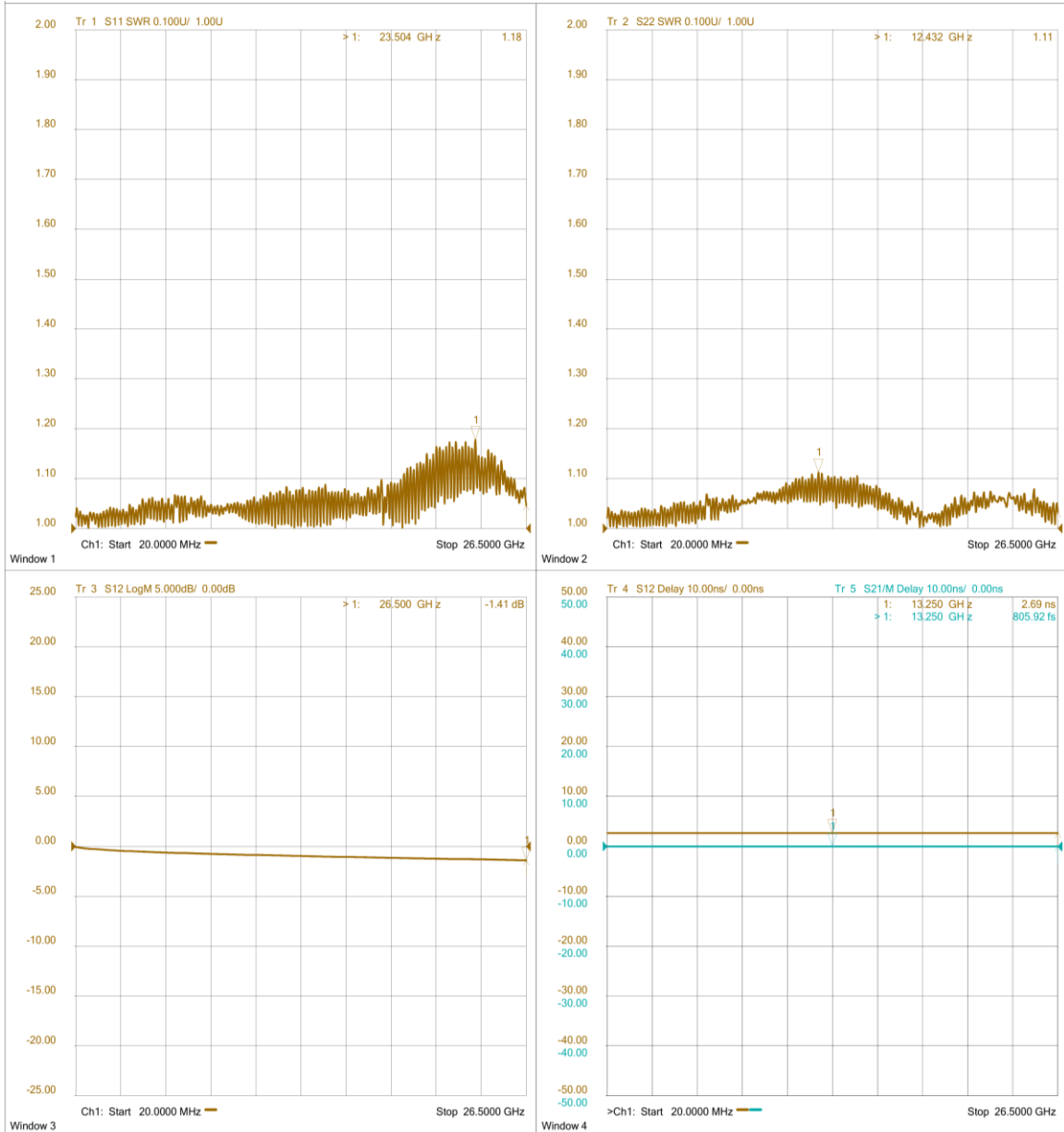


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| PART NUMBER | DESCRIPTION |
|-------------------|---|
| 280280.LL264P1.60 | SMA Male/Stainless To SMA Male/Stainless, DC-26.5GHz LL264P Cable / (Phase \pm 4.5°, Delay $<$ 2ps, Loss stability \pm 0.1dB)/VSWR $<$ 1.3, I.L. $<$ 1.9dB/L:60cm |



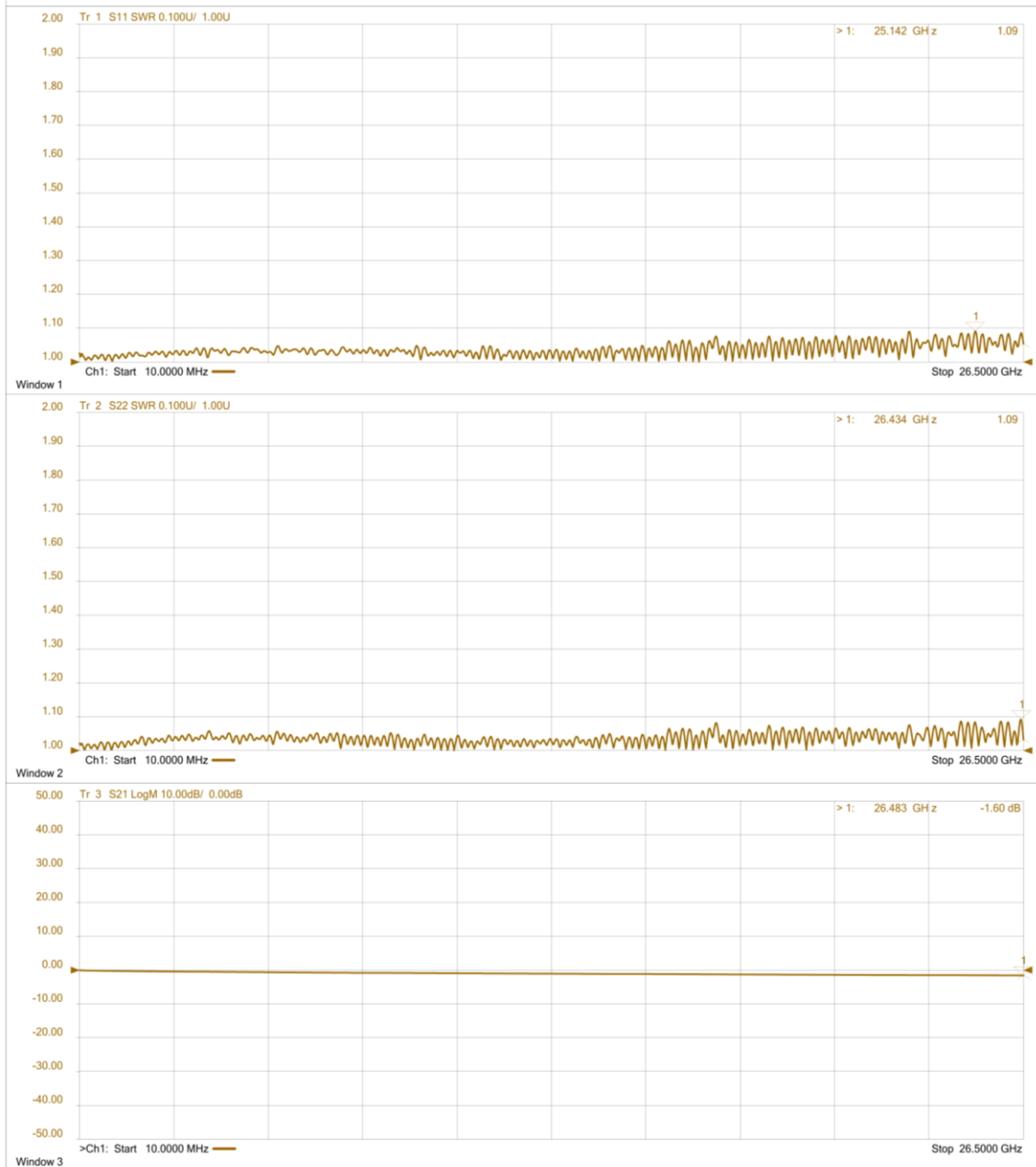
| Channel Settings | | | | | | | | | |
|------------------|------------|---------|-------------|------------|-------------|----------------|--------------|-------------|--|
| Channel | Sweep Type | Points | Start (MHz) | Stop (GHz) | IF BW (kHz) | Sweep Time (s) | Pow 1 (dBm) | Pow 2 (dBm) | |
| 1 | LinFreq | 1601 | 20.000000 | 26.500000 | 10.000000 | 1.000000 | 0.000000 | 0.000000 | |
| Trace Attributes | | | | | | | | | |
| Window | ID | Trace | Channel | Correction | Options | Marker | Position | Response | |
| 1 | 1 | S11 | 1 | C 2-Port | | 1 | 23504.45 MHz | 1.1779 | |
| 2 | 1 | S22 | 1 | C 2-Port | | 1 | 12432.5 MHz | 1.1125 | |
| 3 | 1 | S12 | 1 | C 2-Port | | 1 | 26500 MHz | -1.4077 dB | |
| 4 | 1 | S12 | 1 | C 2-Port | | 1 | 13250 MHz | 2.6902 ns | |
| 2 | 2 | S21 / M | 1 | C 2-Port | | 1 | 13250 MHz | 805.92 fs | |

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| PART NUMBER | DESCRIPTION |
|------------------|--|
| 140140.LL264P.60 | 2.92mm Male/Stainless To 2.92mm Male/Stainless, DC-26.5GHz LL264P Cable / VSWR<1.25, IL<2.0dB/L:60cm |



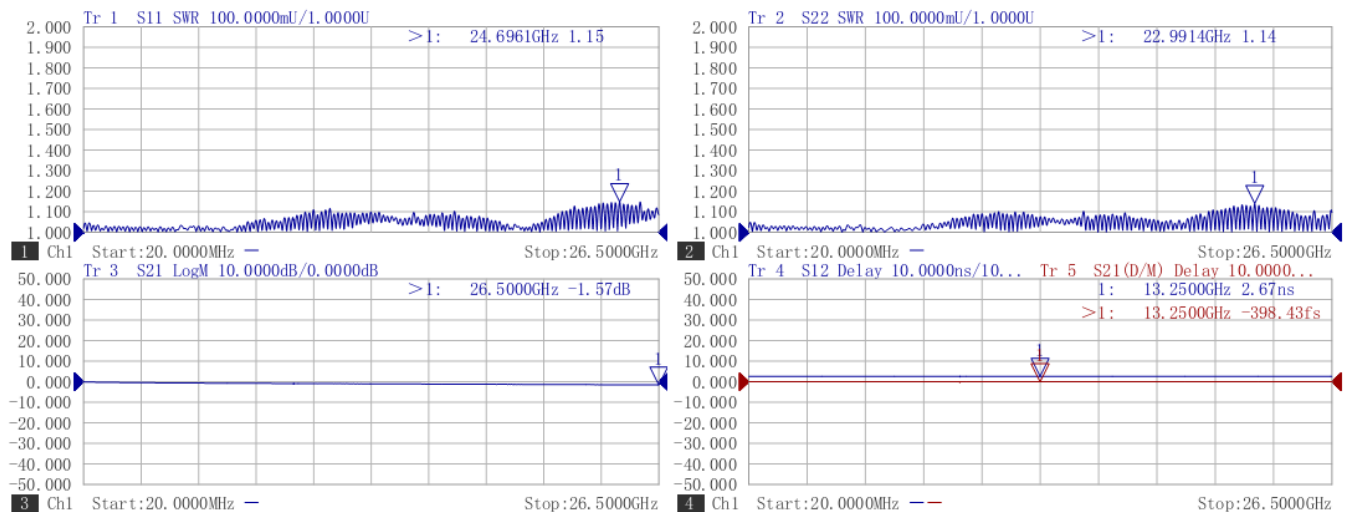
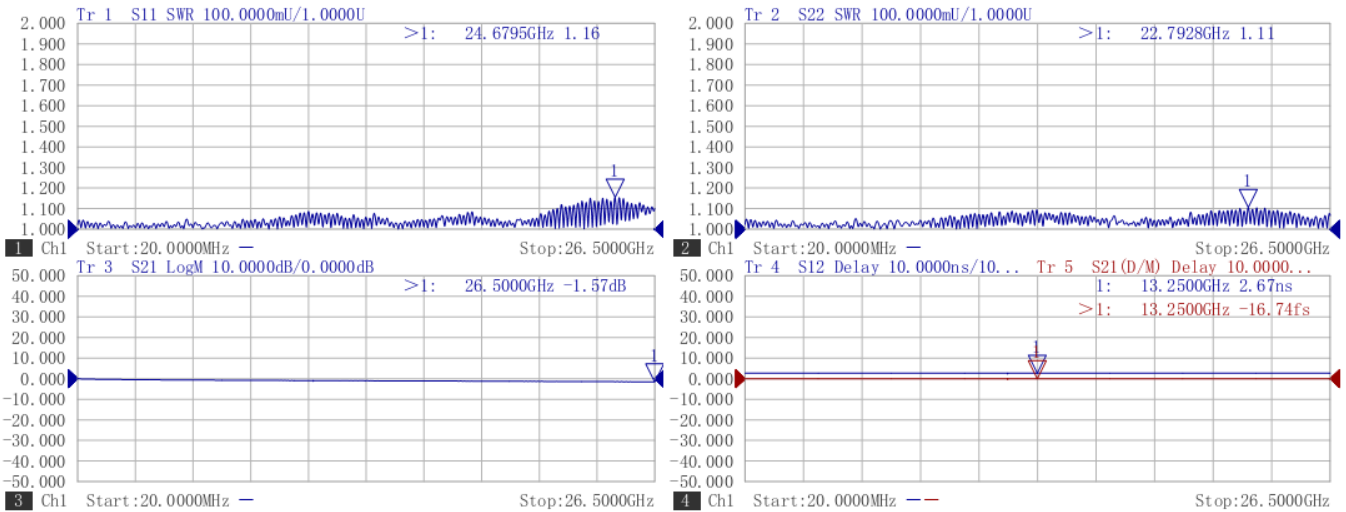
| Channel Settings | | | | | | | | | |
|------------------|-------|------|--------|-------------|------------|-------------|----------------|-------------|-------------|
| Channel | Sweep | Type | Points | Start (MHz) | Stop (GHz) | IF BW (kHz) | Sweep Time (s) | Pow 1 (dBm) | Pow 2 (dBm) |
| 1 | Lin | Freq | 1601 | 10.000000 | 26.500000 | 10.000000 | 1.000000 | 0.000000 | 0.000000 |

| Trace Attributes | | | | | | | | |
|------------------|----|-------|---------|------------|---------|--------|---------------|------------|
| Window | ID | Trace | Channel | Correction | Options | Marker | Position | Response |
| 1 | 1 | S11 | 1 | C 2-Port | | 1 | 25142.387 MHz | 1.0908 |
| 2 | 1 | S22 | 1 | C 2-Port | | 1 | 26433.775 MHz | 1.0920 |
| 3 | 1 | S21 | 1 | C 2-Port | | 1 | 26433.775 MHz | -1.6010 dB |

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| PART NUMBER | DESCRIPTION |
|-------------------|--|
| 160170.LL264P1.60 | 3.5mm Male To 3.5 Female, DC-26.5GHz LL264P Cable/VSWR<1.30, IL<2dB, phase match<±2ps/L:60cm |



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