

**Summary Data  
For  
EWDM-6G18G-65-70MV-1**

|    |                                   |                                              |                           |            |
|----|-----------------------------------|----------------------------------------------|---------------------------|------------|
| 13 | SW Linear Gain                    | +7 dB MIN, 15 dB MAX                         | 10.3 dB MIN / 12.6 dB MAX | PMI<br>QA3 |
| 14 | SW Frequency Flatness:            | ±1.5 dB MAX                                  | ±1.1 dB                   |            |
| 15 | SW 1 dB Compression Point:        | +3 dBm MIN                                   | 4 dBm                     |            |
| 16 | SW Saturated Power:               | +9 dBm MAX                                   | 5.4 dBm                   |            |
| 17 | SW Second Harmonic:               | -9 dBc MIN                                   | -33 dBc                   |            |
| 18 | SW Third Harmonic:                | -12 dBc MIN                                  | -54 dBc                   |            |
| 19 | VIDEO OUT TSS:                    | -71 dBm MAX                                  | -71 dBm                   |            |
| 20 | VIDEO OUT Dynamic Range:          | -65 to 0 dBm                                 | -65 to 0 dBm              |            |
| 21 | VIDEO OUT Log Slope Fixed:        | 70 ± 3mV/dB                                  | 70.5 mV/dB                |            |
| 22 | VIDEO OUT Log Linearity:          | ±1.0 dB MAX @12 GHZ                          | +0.47 / 0.31 dB           |            |
| 23 | VIDEO OUT Log Accuracy:           | ±2.0 dB MAX                                  | +1.43 / 1.41 dB           |            |
| 24 | VIDEO OUT Absolute Log Accuracy:  | ±2.25 dB MAX                                 | +1.95 / -1.9 dB           |            |
| 25 | VIDEO OUT DC Offset:              | 0 ±70 mV (RF Input Terminated & DC Power On) | -18 mV                    |            |
| 26 | VIDEO OUT Rise Time (10% to 90%): | 25 ns TYP 28 ns MAX                          | 26 ns                     |            |
| 27 | VIDEO OUT Fall Time (90% to 10%): | 300 ns MAX                                   | 189.7 ns                  |            |
| 28 | VIDEO OUT Settling Time:          | 50 ns With in ±70 mV of final value, MAX     | 40 ns typ                 |            |

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|    |                                                                 |                                                                                                                        |                  |         |
|----|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------|---------|
| 29 | VIDEO OUT Recovery Time:                                        | 0.5 us MAX to within 1 dB of baseline                                                                                  | < 0.5 us         | PMI QA3 |
| 30 | VIDEO OUT Video Frequency Flatness:                             | ±1.75 dB MAX                                                                                                           | ±1.19 dB         |         |
| 31 | VIDEO OUT CW Immunity:                                          | A. CW Immune Power TSS to -40 dBm Baseline Shift: 200 mV MAX                                                           | 125 mV TYP       |         |
|    |                                                                 | B. Pulse Peak Amplitude Loss; 2 dB MAX                                                                                 | 1.7 dB TYP       |         |
|    |                                                                 | CW Immunity Time at CW = -40 dBm, ≤ 3 ms                                                                               | 1.4ms            |         |
|    |                                                                 | CW Recovery Time at CW = -40 dBm, ≤ 50 us                                                                              | 40 us TYP        |         |
| 32 | VIDEO OUT Pulse Response, input Signal:                         | 100 ns to 300 us                                                                                                       | 100 ns to 300 us |         |
| 33 | VIDEO OUT Impedance:                                            | 75 ±1 Ω                                                                                                                | 75 Ω             |         |
| 34 | VIDEO driver capability                                         | 150 ft RG11 into 75 ohm load                                                                                           | PASS             |         |
| 35 | Pulse density capability                                        | 10% duty cycle 100 ns, 70% duty cycle 300 us at peak power -10 dBm with 1 dB variable for pulse amplitude and baseline | PASS             |         |
| 36 | VIDEO OUT Noise Level (Vp-p):                                   | 160 mV TYP                                                                                                             | 140mV TYP        |         |
| 37 | Droop of the Output Video Pulse: @ -65 dBm & 300 us pulse width | 70mV (1 dB) MAX                                                                                                        | 45 mV TYP        |         |



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|    |                                          |                                           |                                  |            |
|----|------------------------------------------|-------------------------------------------|----------------------------------|------------|
| 38 | VIDEO OUT<br>Propagation Delay:          | 50 ns MAX (excluding cable)               | 33 ns                            | PMI<br>QA3 |
| 39 | Power Supply                             | +15 V @ 1000 mA MAX<br>-15 V @ 500 mA MAX | +15 V @ 620 mA<br>-15 V @ 140 mA |            |
| 40 | Power Supply Ripple<br>From DC to 10 MHz | 100 mV MAX                                | PASS                             |            |

QA/QC Approval:

*K. Luter*

Date:

*7.19.24*

LOG TRANSFER WITH FREQUENCY

TESTED BY: Jim Hopson  
MODEL: EWDIM-6G18G-6S-70MV-1  
SERIAL NO: PL40932 RF  
DATE: 07/18/24

Test Temp: 25C  
Video Offset: -0.018

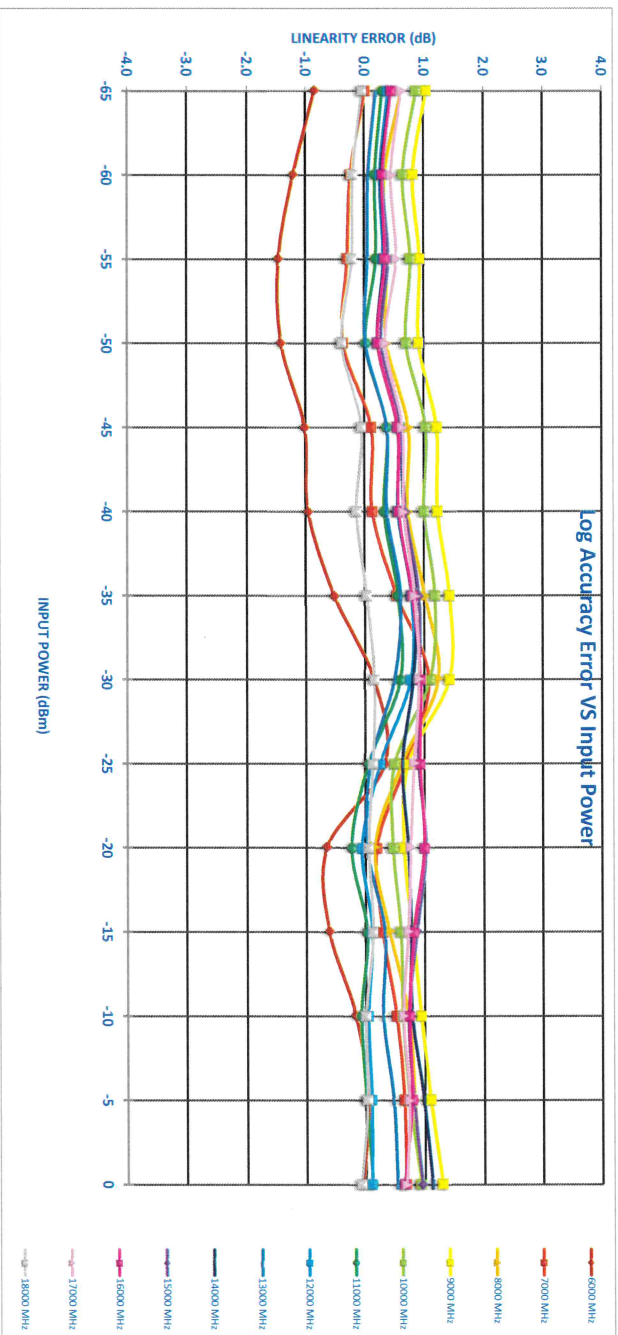
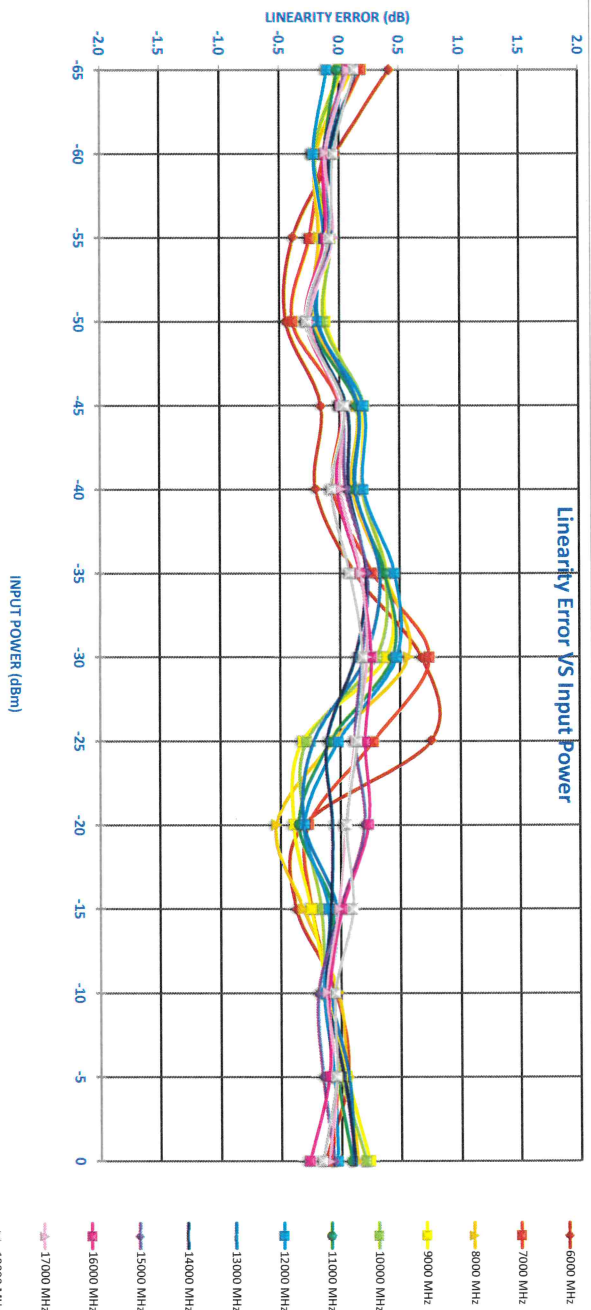
PLANAR MONOLITHICS INDUSTRIES  
4921 Robert J. Matthews Parkway STE 1  
TEL: 916-542-1401 FAX: 301-662-1731  
EMAIL: SALES@PMI-RF.COM  
ISO 9001:2000 CERTIFIED



| Frequency |                | -65   | -60   | -55   | -50   | -45   | -40   | -35   | -30  | -25   | -20   | -15   | -10   | -5    | 0     | RF Input Power (dBm) |
|-----------|----------------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|----------------------|
| 6000 MHz  | INTERCEPT (mV) | 236   | 561   | 893   | 1246  | 1624  | 1978  | 2359  | 2756 | 3119  | 3400  | 3753  | 4134  | 4498  | 4842  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 30    | -2    | -27   | -32   | -11   | -14   | 9     | 49   | 54    | -22   | -26   | -3    | 4     | -9    | Error (mV)           |
|           |                | 0.43  | -0.03 | -0.38 | -0.44 | -0.15 | -0.20 | 0.13  | 0.68 | 0.76  | -0.31 | -0.37 | -0.04 | 0.06  | -0.13 | LINEARITY ERROR (dB) |
|           |                | -0.84 | -1.20 | -1.46 | -1.41 | -1.01 | -0.96 | -0.51 | 0.16 | 0.34  | -0.64 | -0.60 | -0.16 | 0.04  | -0.04 | ACCURACY ERROR (dB)  |
| 7000 MHz  | INTERCEPT (mV) | 296   | 629   | 975   | 1320  | 1703  | 2054  | 2433  | 2821 | 3143  | 3459  | 3816  | 4182  | 4541  | 4893  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 14    | -8    | -17   | -23   | 0     | -4    | 20    | 53   | 20    | -19   | -17   | -8    | -2    | -5    | Error (mV)           |
|           |                | 0.19  | -0.12 | -0.25 | -0.39 | 0.00  | -0.05 | 0.28  | 0.75 | 0.28  | -0.27 | -0.24 | -0.09 | -0.03 | -0.08 | LINEARITY ERROR (dB) |
|           |                | 0.01  | -0.23 | -0.29 | -0.36 | 0.11  | 0.13  | 0.54  | 1.09 | 0.69  | 0.20  | 0.30  | 0.53  | 0.66  | 0.69  | ACCURACY ERROR (dB)  |
| 8000 MHz  | INTERCEPT (mV) | 339   | 669   | 1022  | 1371  | 1747  | 2096  | 2466  | 2832 | 3139  | 3457  | 3824  | 4196  | 4553  | 4910  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 8     | -14   | -12   | -15   | 10    | 7     | 26    | 40   | -4    | -38   | -22   | -7    | 4     | 10    | Error (mV)           |
|           |                | 0.11  | -0.19 | -0.17 | -0.21 | 0.14  | 0.11  | 0.37  | 0.58 | -0.06 | -0.53 | -0.31 | -0.02 | 0.06  | -0.14 | LINEARITY ERROR (dB) |
|           |                | 0.63  | 0.34  | 0.39  | 0.37  | 0.74  | 0.73  | 1.01  | 1.24 | 0.63  | 0.17  | 0.41  | 0.73  | 0.83  | 0.93  | ACCURACY ERROR (dB)  |
| 9000 MHz  | INTERCEPT (mV) | 368   | 702   | 1060  | 1409  | 1780  | 2131  | 2495  | 2845 | 3146  | 3491  | 3851  | 4211  | 4572  | 4936  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 0.03  | -0.20 | -0.09 | -0.11 | 0.18  | 0.20  | 0.39  | 0.39 | -0.31 | -0.39 | -0.25 | -0.11 | 0.04  | 0.24  | Error (mV)           |
|           |                | 1.04  | 0.81  | 0.93  | 0.91  | 1.21  | 1.23  | 1.43  | 1.43 | 0.73  | 0.66  | 0.80  | 0.94  | 1.10  | 1.30  | LINEARITY ERROR (dB) |
|           |                |       |       |       |       |       |       |       |      |       |       |       |       |       |       | ACCURACY ERROR (dB)  |
| 10000 MHz | INTERCEPT (mV) | 356   | 690   | 1049  | 1394  | 1767  | 2115  | 2478  | 2822 | 3130  | 3478  | 3837  | 4189  | 4547  | 4911  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 1     | -15   | -5    | -9    | 14    | 13    | 27    | 21   | -20   | -21   | -12   | -9    | 0     | 14    | Error (mV)           |
|           |                | 0.01  | -0.21 | -0.07 | -0.13 | 0.21  | 0.19  | 0.38  | 0.31 | -0.29 | -0.30 | -0.17 | -0.13 | 0.00  | 0.21  | LINEARITY ERROR (dB) |
|           |                | 0.87  | 0.64  | 0.77  | 0.70  | 1.03  | 1.00  | 1.19  | 1.10 | 0.50  | 0.47  | 0.60  | 0.63  | 0.74  | 0.94  | ACCURACY ERROR (dB)  |
| 12000 MHz | INTERCEPT (mV) | 316   | 657   | 1008  | 1346  | 1721  | 2068  | 2434  | 2787 | 3099  | 3429  | 3797  | 4140  | 4496  | 4853  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | -0.02 | -0.13 | -0.09 | -0.24 | 0.14  | 0.12  | 0.37  | 0.44 | -0.08 | -0.35 | -0.07 | -0.15 | -0.04 | 0.08  | Error (mV)           |
|           |                | 0.30  | 0.17  | 0.19  | 0.01  | 0.37  | 0.33  | 0.56  | 0.60 | 0.06  | -0.23 | 0.03  | -0.07 | 0.01  | 0.11  | LINEARITY ERROR (dB) |
|           |                |       |       |       |       |       |       |       |      |       |       |       |       |       |       | ACCURACY ERROR (dB)  |
| 12500 MHz | INTERCEPT (mV) | 323   | 663   | 1017  | 1361  | 1736  | 2084  | 2450  | 2799 | 3113  | 3441  | 3803  | 4148  | 4502  | 4852  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | -7    | -15   | -9    | -13   | 14    | 18    | 32    | 33   | -1    | -21   | -7    | -10   | -4    | -2    | Error (mV)           |
|           |                | -0.10 | -0.22 | -0.13 | -0.19 | 0.20  | 0.20  | 0.46  | 0.47 | -0.02 | -0.31 | -0.10 | -0.15 | -0.06 | -0.03 | LINEARITY ERROR (dB) |
|           |                | 0.40  | 0.26  | 0.31  | 0.23  | 0.59  | 0.56  | 0.79  | 0.77 | -0.06 | 0.11  | 0.04  | 0.10  | 0.10  | 0.10  | ACCURACY ERROR (dB)  |
| 13000 MHz | INTERCEPT (mV) | 308   | 649   | 998   | 1346  | 1721  | 2071  | 2437  | 2780 | 3101  | 3447  | 3818  | 4166  | 4528  | 4882  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 4     | -6    | -9    | -13   | 11    | 9     | 23    | 15   | -16   | -22   | -2    | -6    | 4     | 7     | Error (mV)           |
|           |                | 0.06  | -0.09 | -0.13 | -0.18 | 0.15  | 0.13  | 0.33  | 0.21 | -0.23 | -0.31 | -0.03 | -0.08 | 0.06  | 0.10  | LINEARITY ERROR (dB) |
|           |                | 0.19  | 0.06  | 0.04  | 0.01  | 0.37  | 0.37  | 0.60  | 0.50 | 0.09  | 0.03  | 0.33  | 0.30  | 0.47  | 0.53  | ACCURACY ERROR (dB)  |
| 14000 MHz | INTERCEPT (mV) | 327   | 665   | 1020  | 1361  | 1736  | 2091  | 2455  | 2802 | 3139  | 3496  | 3849  | 4200  | 4564  | 4924  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 10    | -5    | -4    | -17   | 4     | 5     | 16    | 9    | -8    | -5    | -6    | -8    | 2     | 8     | Error (mV)           |
|           |                | 0.15  | -0.08 | -0.06 | -0.24 | 0.06  | 0.08  | 0.22  | 0.12 | -0.11 | -0.07 | -0.08 | -0.12 | 0.02  | 0.11  | LINEARITY ERROR (dB) |
|           |                | 0.46  | 0.29  | 0.36  | 0.23  | 0.59  | 0.66  | 0.86  | 0.81 | 0.63  | 0.73  | 0.77  | 0.79  | 0.99  | 1.13  | ACCURACY ERROR (dB)  |
| 15000 MHz | INTERCEPT (mV) | 327   | 667   | 1023  | 1365  | 1737  | 2093  | 2459  | 2809 | 3158  | 3517  | 3856  | 4196  | 4552  | 4912  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 4     | -9    | -6    | -18   | 1     | 4     | 16    | 13   | 9     | 14    | 0     | -13   | -11   | -4    | Error (mV)           |
|           |                | 0.06  | -0.13 | -0.09 | -0.25 | 0.01  | 0.05  | 0.23  | 0.18 | -0.12 | 0.20  | 0.00  | -0.19 | -0.15 | -0.06 | LINEARITY ERROR (dB) |
|           |                | 0.46  | 0.31  | 0.40  | 0.29  | 0.60  | 0.69  | 0.91  | 0.91 | 0.90  | 1.03  | 0.87  | 0.73  | 0.81  | 0.96  | ACCURACY ERROR (dB)  |
| 16000 MHz | INTERCEPT (mV) | 327   | 666   | 1019  | 1361  | 1734  | 2085  | 2451  | 2811 | 3160  | 3515  | 3852  | 4197  | 4550  | 4891  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 5     | -9    | -8    | -19   | 1     | 1     | 12    | 19   | 15    | 17    | 1     | -7    | -7    | -19   | Error (mV)           |
|           |                | 0.08  | -0.12 | -0.12 | -0.27 | 0.01  | -0.02 | 0.17  | 0.27 | 0.21  | 0.24  | 0.02  | -0.10 | -0.10 | -0.27 | LINEARITY ERROR (dB) |
|           |                | 0.46  | 0.30  | 0.34  | 0.23  | 0.56  | 0.57  | 0.80  | 0.94 | 0.93  | 1.00  | 0.81  | 0.74  | 0.79  | 0.66  | ACCURACY ERROR (dB)  |
| 17000 MHz | INTERCEPT (mV) | 339   | 677   | 1033  | 1370  | 1740  | 2091  | 2454  | 2809 | 3153  | 3499  | 3846  | 4190  | 4547  | 4894  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 6     | -8    | -3    | -18   | 1     | 1     | 12    | 16   | 9     | 3     | -1    | -8    | -3    | -7    | Error (mV)           |
|           |                | 0.08  | -0.11 | -0.05 | -0.25 | 0.02  | 0.01  | 0.18  | 0.23 | 0.12  | 0.05  | -0.01 | -0.12 | -0.04 | -0.10 | LINEARITY ERROR (dB) |
|           |                | 0.63  | 0.46  | 0.54  | 0.36  | 0.64  | 0.66  | 0.84  | 0.91 | 0.83  | 0.77  | 0.73  | 0.64  | 0.74  | 0.70  | ACCURACY ERROR (dB)  |
| 18000 MHz | INTERCEPT (mV) | 292   | 631   | 980   | 1318  | 1691  | 2035  | 2397  | 2756 | 3104  | 3449  | 3804  | 4145  | 4497  | 4840  | Measured Value (mV)  |
|           | SLOPE (mV/dB)  | 9     | -3    | -6    | -19   | 2     | -5    | 6     | 13   | 7     | 3     | -3    | -3    | -3    | -11   | Error (mV)           |
|           |                | 0.13  | -0.05 | -0.08 | -0.27 | 0.04  | -0.07 | 0.08  | 0.19 | 0.14  | 0.05  | 0.10  | -0.05 | -0.04 | -0.16 | LINEARITY ERROR (dB) |
|           |                | -0.04 | -0.20 | -0.21 | -0.39 | -0.06 | -0.14 | 0.03  | 0.16 | 0.13  | 0.06  | 0.13  | 0.00  | 0.03  | -0.07 | ACCURACY ERROR (dB)  |
| Flatness  |                | 0.94  | 1.01  | 1.19  | 1.16  | 1.11  | 1.09  | 0.97  | 0.64 | 0.44  | 0.84  | 0.74  | 0.55  | 0.54  | 0.67  |                      |

PL40932 RF

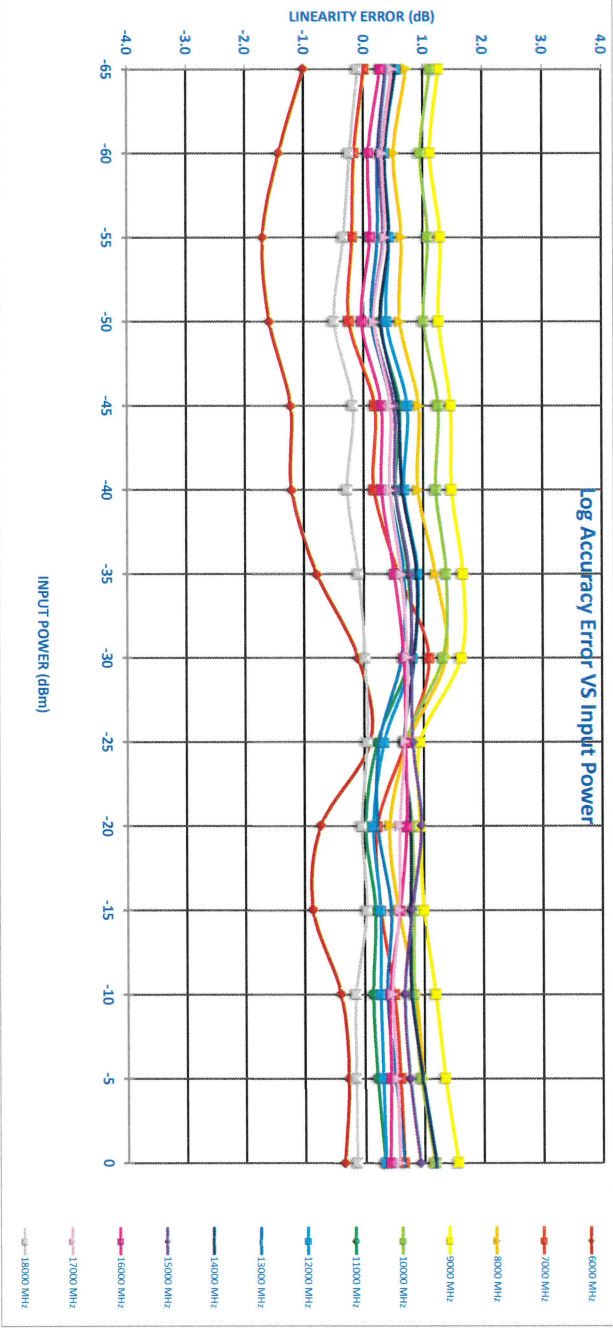
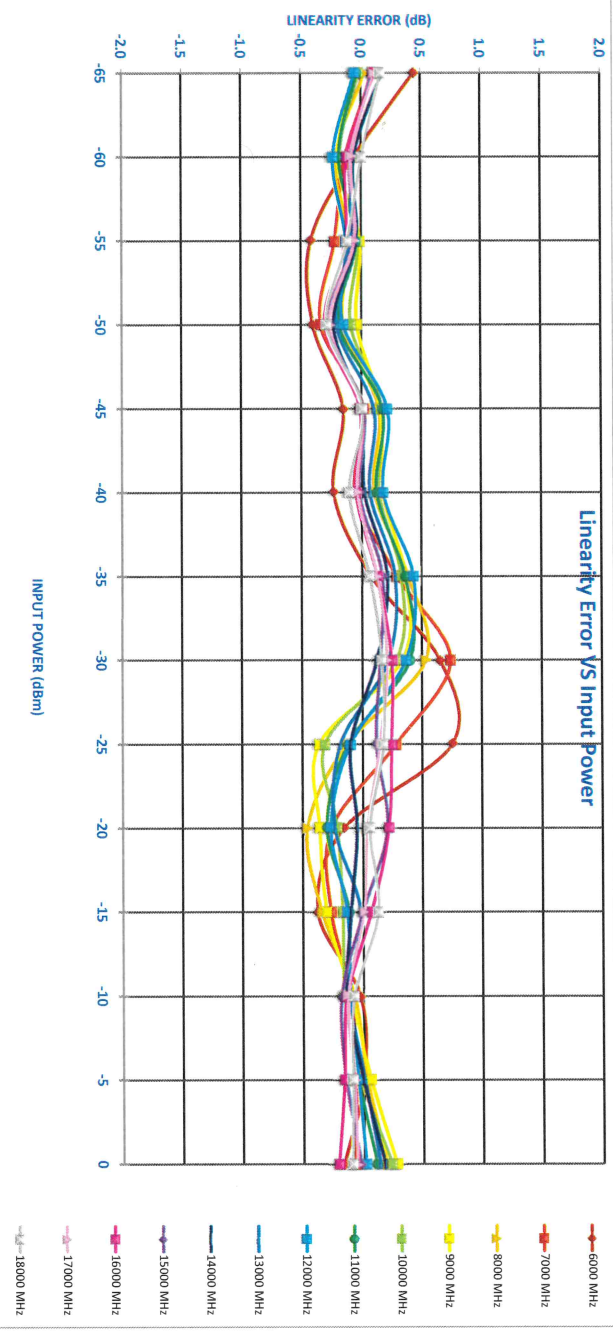
25°C



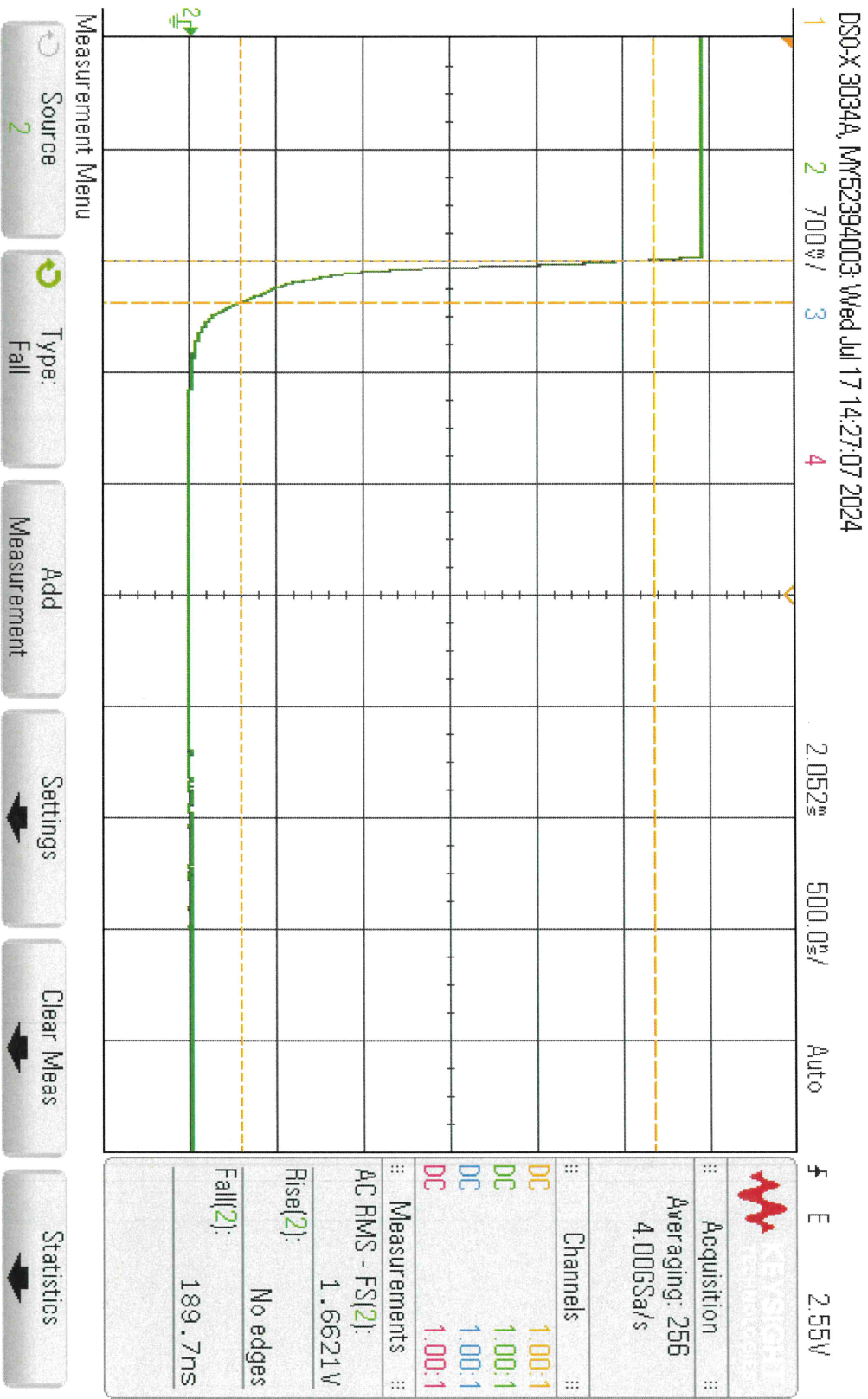


PL40932 BIT

25°C



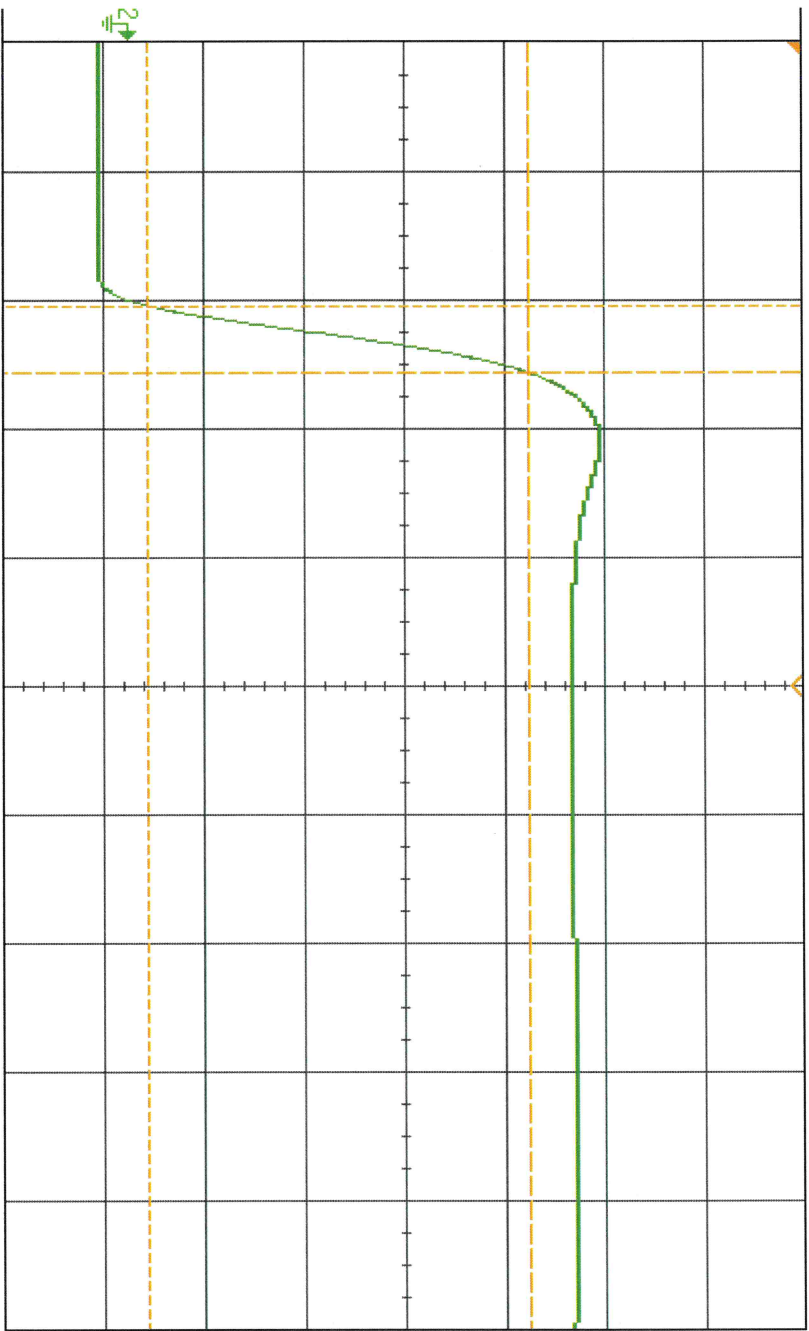
# PL40932 Recovery



PL40932  
RISCTime

DSO-X 3034A, MW52394003: Wed Jul 17 14:25:42 2024

1 2 70% / 3 4 2.000ms 50.00%/ Stop f E 2.55V



Acquire Menu

Acq Mode Averaging

# Avgs 256

Segmented

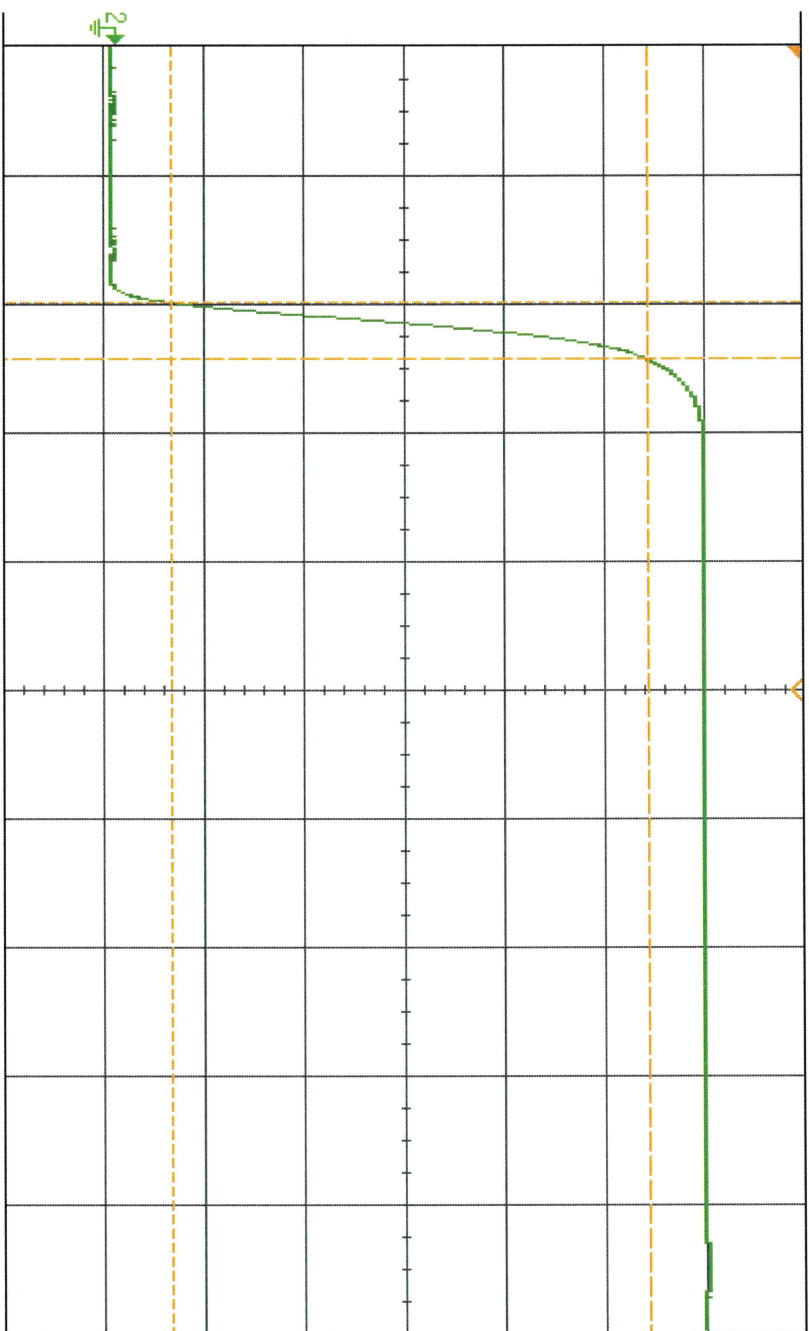
|                          |          |
|--------------------------|----------|
| KEYSIGHT<br>TECHNOLOGIES |          |
| Acquisition              |          |
| Averaging: 256           |          |
| 4.00GSa/s                |          |
| Channels                 |          |
| DC                       | 1.00:1   |
| DC                       | 1.00:1   |
| DC                       | 1.00:1   |
| DC                       | 1.00:1   |
| Measurements             |          |
| Fall(2):                 | No edges |
| AC RMS - FS(2):          | 136.40mV |
| Rise(2):                 | 26.0ns   |

PL40932

Settle

DSO-X 3034A, MW52394003, Wed Jul 17 14:24:01 2024

1 2 700V/ 3 2.000ms 50.00V/ 4 Auto f E 2.55V



Measurement Menu

Source 2

Type: Rise

Add Measurement

Settings

Clear Meas

Statistics

**KEYSIGHT**  
TECHNOLOGIES

**Acquisition**  
Averaging: B4  
4.006Sa/s

| Channels |        |
|----------|--------|
| DC       | 1.00:1 |
| DC       | 1.00:1 |
| DC       | 1.00:1 |
| DC       | 1.00:1 |

**Measurements**

|                 |          |
|-----------------|----------|
| Fall(2):        | No edges |
| AC RMS - FS(2): | 1.6676V  |
| Rise(2):        | 21.8ns   |