



**SUMMARY TEST DATA**  
**ON**  
**SDLVA-8G18G-40-5-SFF**

PL28824/2018

**CUSTOMER:**  
**SO:**  
**MODEL NO:** SDLVA-8G18G-40-5-SFF  
**SERIAL NO:** PL28824/2018

**TESTED BY:** H. Gonzales  
**TEMPERATURE:** +25°C, -54°C, +95°C  
**DATE:** Tuesday, April 28, 2020  
**DRAWING NO:** 27615839      **REV:** A1

| TEST ITEM NO: | PARAMETERS                 | SPECIFIED VALUE  | MEASURED VALUE                     | REMARKS QA/QC |          |
|---------------|----------------------------|--|------------------------------------|---------------|----------|
| 1             | Frequency Range            | 8 to 18 GHz  | 8 to 18 GHz                        | PMI QA 1      |          |
| 2             | Frequency Flatness         | ±2.0 dB  | ±1.6 dB<br>(See Plots)             |               |          |
| 3             | Log Linearity Over Temp.   | ±1.0 dB<br>(P <sub>in</sub> = -30dBm @ -54°C to +85°C) | ± 0.53dB<br>(See Plots)            |               |          |
| 4             | Logging Range              | -40 to +0 dBm  | -40 to +0 dBm<br>(See Plots)       |               |          |
| 5             | Input VSWR                 | 2.5:1 Max.   | 2.29:1<br>(See Plot)               |               |          |
| 6             | Max. RF Input              | +10 dBm CW (Survival)                                  | Pass (See Typical Characteristics) |               |          |
| 7             | Log Video Output Voltage   | 10mV to 2.25V  | 48mV to 1.96V<br>(See Plots)       |               |          |
| 8             | Log Video Output Slope     | 50mV/dB ±6.0mV/dB Max.                                 | 47.20mV/dB<br>(See Plots)          |               |          |
| 9             | Log Video Output Rise Time | 25ns Max.<br>(P <sub>in</sub> = -20dBm @ 10% to 90%)   | 8.90ns<br>(See Plots)              |               |          |
| 10            | Log Video Output Fall Time | 30ns Max.<br>(P <sub>in</sub> = -20dBm @ 90% to 10%)   | 17.50ns<br>(See Plot)              |               |          |
| 11            | Log Video Recovery Time    | 40ns Max.<br>(P <sub>in</sub> = -20dBm @ 90% to 10%)   | 37.30ns<br>(see Plot)              |               |          |
| 12            | Operating Voltage          | +5V ±5%<br>(Max. Ripple 100 mV pk-pk, 20 MHz BW)       | Pass                               |               |          |
| 13            | Operating Current          | 130 mA Max.  | 130mA @ 5 Volts                    |               | PMI QA 1 |

QA/QC Approval:  PMI QA 1      Date: 4/29/20



# SUMMARY TEST DATA ON SDLVA-8G18G-40-5-SFF +25°C

PL28824/2018

LOG TRANSFER VS FREQUENCY  
 MODEL: SDLVA-8G18G-40-5-SFF    OPTION :    Tuesday, April 28, 2020  
 TESTED BY: H. Gonzales    10:23 AM  
 SERIAL No. PL28824/2018  
 Temp: 25°C

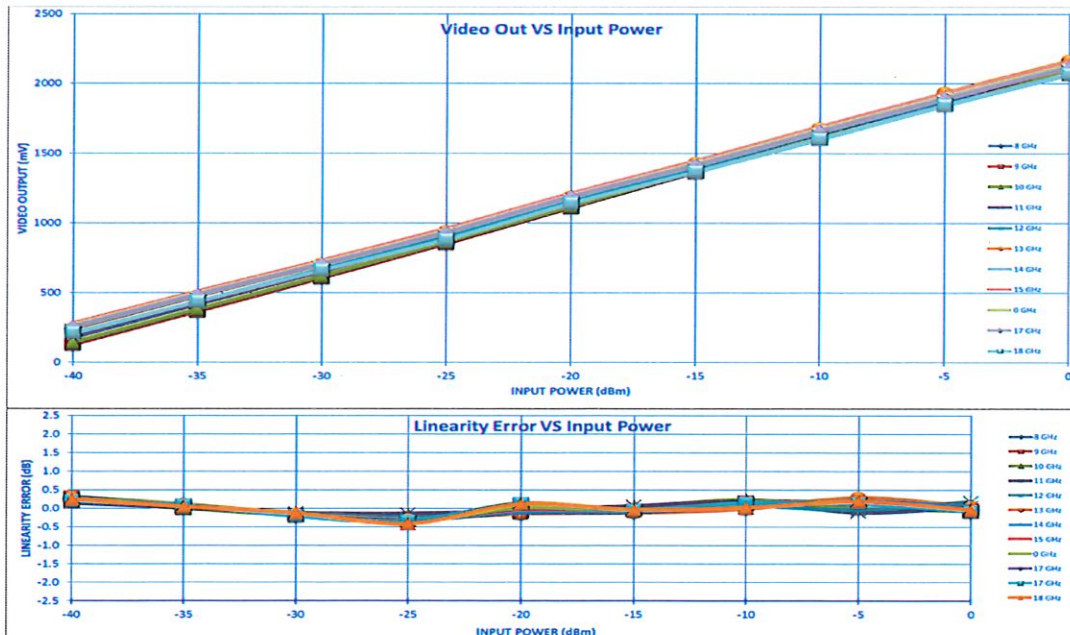


Frequency

| Frequency | INTERCEPT (mV) | SLOPE (mV/dB) | -40  | -35  | -30   | -25   | -20   | -15   | -10   | -5    | 0     | RF Input Power (dBm) |
|-----------|----------------|---------------|------|------|-------|-------|-------|-------|-------|-------|-------|----------------------|
| 8 GHz     | 2140           | 50.7          | 127  | 367  | 610   | 858   | 1120  | 1378  | 1641  | 1895  | 2138  | Measured Value (mV)  |
|           |                |               | 15   | 1    | -9    | -14   | -6    | -2    | 8     | 8     | -2    | Error (mV)           |
|           |                |               | 0.30 | 0.02 | -0.17 | -0.28 | -0.11 | -0.04 | 0.15  | 0.17  | -0.03 | LINEARITY ERROR (dB) |
| 9 GHz     | 2119           | 50.2          | 126  | 363  | 603   | 850   | 1109  | 1364  | 1626  | 1874  | 2117  | Measured Value (mV)  |
|           |                |               | 15   | 1    | -9    | -13   | -6    | -2    | 9     | 7     | -1    | Error (mV)           |
|           |                |               | 0.30 | 0.02 | -0.19 | -0.26 | -0.12 | -0.04 | 0.18  | 0.13  | -0.02 | LINEARITY ERROR (dB) |
| 10 GHz    | 2107           | 49.3          | 143  | 380  | 618   | 865   | 1118  | 1369  | 1624  | 1860  | 2103  | Measured Value (mV)  |
|           |                |               | 9    | 0    | -9    | -9    | -2    | 2     | 11    | 0     | -3    | Error (mV)           |
|           |                |               | 0.19 | 0.00 | -0.17 | -0.18 | -0.04 | 0.05  | 0.22  | 0.00  | -0.07 | LINEARITY ERROR (dB) |
| 11 GHz    | 2120           | 48.7          | 179  | 416  | 653   | 895   | 1143  | 1393  | 1641  | 1871  | 2122  | Measured Value (mV)  |
|           |                |               | 7    | 1    | -6    | -7    | -2    | 3     | 8     | -5    | 2     | Error (mV)           |
|           |                |               | 0.14 | 0.02 | -0.13 | -0.15 | -0.05 | 0.06  | 0.17  | -0.11 | 0.04  | LINEARITY ERROR (dB) |
| 12 GHz    | 2127           | 48.4          | 202  | 435  | 668   | 904   | 1153  | 1399  | 1646  | 1893  | 2136  | Measured Value (mV)  |
|           |                |               | 12   | 3    | -6    | -12   | -6    | -2    | 3     | -2    | 9     | Error (mV)           |
|           |                |               | 0.25 | 0.07 | -0.12 | -0.25 | -0.12 | -0.04 | 0.07  | -0.04 | 0.18  | LINEARITY ERROR (dB) |
| 13 GHz    | 2159           | 48.3          | 239  | 472  | 701   | 936   | 1185  | 1428  | 1675  | 1931  | 2162  | Measured Value (mV)  |
|           |                |               | 14   | 5    | -7    | -14   | -7    | -6    | -1    | 13    | 3     | Error (mV)           |
|           |                |               | 0.29 | 0.11 | -0.15 | -0.30 | -0.15 | -0.12 | -0.02 | 0.28  | 0.05  | LINEARITY ERROR (dB) |
| 14 GHz    | 2145           | 47.8          | 249  | 477  | 703   | 935   | 1184  | 1424  | 1669  | 1915  | 2148  | Measured Value (mV)  |
|           |                |               | 15   | 4    | -8    | -15   | -5    | -5    | 2     | 8     | 3     | Error (mV)           |
|           |                |               | 0.31 | 0.09 | -0.18 | -0.32 | -0.11 | -0.09 | 0.05  | 0.19  | 0.06  | LINEARITY ERROR (dB) |
| 15 GHz    | 2156           | 47.3          | 279  | 508  | 729   | 959   | 1210  | 1445  | 1689  | 1928  | 2155  | Measured Value (mV)  |
|           |                |               | 13   | 4    | -10   | -16   | -1    | -2    | 5     | 8     | -1    | Error (mV)           |
|           |                |               | 0.27 | 0.09 | -0.21 | -0.34 | -0.03 | -0.05 | 0.11  | 0.17  | -0.02 | LINEARITY ERROR (dB) |
| 0 GHz     | 2131           | 47            | 264  | 492  | 713   | 940   | 1192  | 1424  | 1668  | 1904  | 2129  | Measured Value (mV)  |
|           |                |               | 12   | 5    | -10   | -17   | 1     | -2    | 7     | 7     | -2    | Error (mV)           |
|           |                |               | 0.25 | 0.10 | -0.20 | -0.37 | 0.01  | -0.05 | 0.14  | 0.16  | -0.04 | LINEARITY ERROR (dB) |
| 17 GHz    | 2120           | 46.9          | 255  | 484  | 704   | 932   | 1189  | 1415  | 1657  | 1891  | 2116  | Measured Value (mV)  |
|           |                |               | 9    | 4    | -10   | -16   | 6     | -2    | 6     | 6     | -4    | Error (mV)           |
|           |                |               | 0.20 | 0.09 | -0.21 | -0.35 | 0.13  | -0.05 | 0.14  | 0.13  | -0.08 | LINEARITY ERROR (dB) |
| 18 GHz    | 2069           | 46.7          | 211  | 436  | 661   | 881   | 1140  | 1366  | 1602  | 1844  | 2067  | Measured Value (mV)  |
|           |                |               | 11   | 2    | -6    | -20   | 5     | -2    | 1     | 9     | -2    | Error (mV)           |
|           |                |               | 0.24 | 0.05 | -0.13 | -0.42 | 0.12  | -0.04 | 0.02  | 0.19  | -0.03 | LINEARITY ERROR (dB) |

Average Slope    48.3  
 Flatness ± dB      
 Average Offset    206.7

| 1.6 | 1.5 | 1.3 | 1.1 | 1    | 0.8  | 0.9  | 0.9  | 1    |
|-----|-----|-----|-----|------|------|------|------|------|
| 126 | 363 | 603 | 850 | 1109 | 1364 | 1602 | 1844 | 2067 |
| 279 | 508 | 729 | 959 | 1210 | 1445 | 1689 | 1931 | 2162 |





# SUMMARY TEST DATA ON SDLVA-8G18G-40-5-SFF -54°C

PL28824/2018

LOG TRANSFER VS FREQUENCY  
MODEL: SDLVA-8G18G-40-5-SFF  
TESTED BY: H. Gonzales  
SERIAL No. PL28824/2018  
Temp: -54°C

OPTION :

Tuesday, April 28, 2020  
10:24 AM

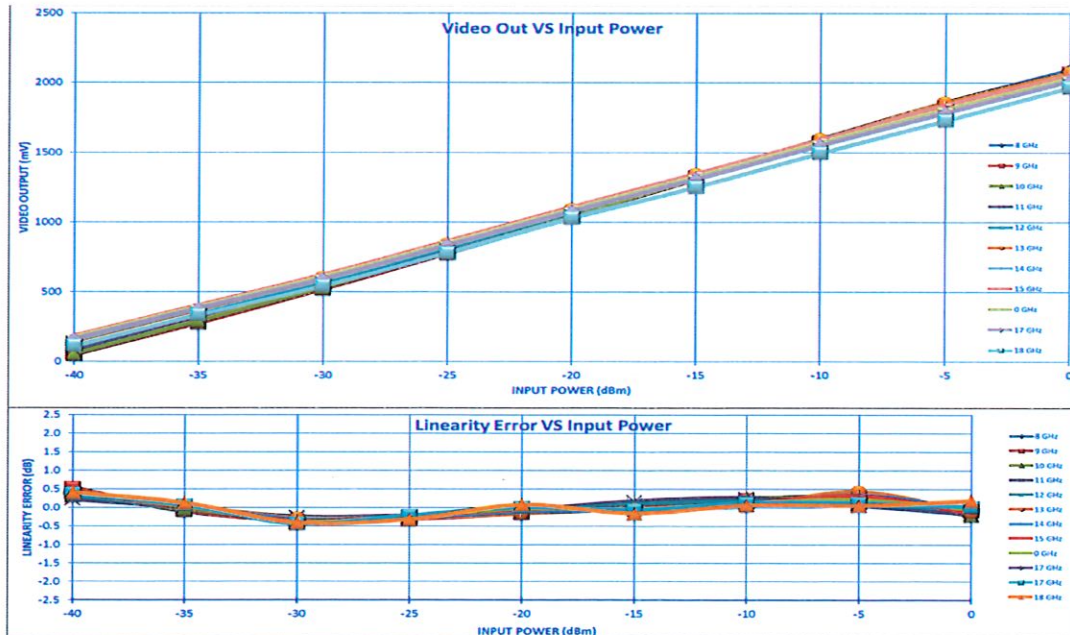


Frequency

| Frequency | INTERCEPT (mV) | SLOPE (mV/dB) | 40   | 35    | 30    | 25    | 20    | 15    | 10   | 5    | 0     | RF Input Power (dBm) |
|-----------|----------------|---------------|------|-------|-------|-------|-------|-------|------|------|-------|----------------------|
| 8 GHz     | 2104           | 52            | 48   | 277   | 525   | 789   | 1056  | 1325  | 1595 | 1859 | 2095  | Measured Value (mV)  |
|           |                |               | 26   | -6    | -18   | -15   | -7    | 2     | 12   | 15   | -9    | Error (mV)           |
|           |                |               | 0.50 | -0.11 | -0.34 | -0.29 | -0.14 | 0.04  | 0.23 | 0.29 | -0.17 | LINEARITY ERROR (dB) |
| 9 GHz     | 2075           | 51.4          | 48   | 272   | 516   | 775   | 1040  | 1306  | 1573 | 1831 | 2069  | Measured Value (mV)  |
|           |                |               | 27   | -5    | -18   | -16   | -8    | 2     | 12   | 13   | -8    | Error (mV)           |
|           |                |               | 0.53 | -0.10 | -0.36 | -0.32 | -0.16 | 0.03  | 0.23 | 0.25 | -0.11 | LINEARITY ERROR (dB) |
| 10 GHz    | 2064           | 50.6          | 55   | 289   | 530   | 787   | 1048  | 1310  | 1571 | 1819 | 2053  | Measured Value (mV)  |
|           |                |               | 16   | -2    | -15   | -11   | -3    | 5     | 13   | 8    | -11   | Error (mV)           |
|           |                |               | 0.31 | -0.05 | -0.30 | -0.21 | -0.07 | 0.10  | 0.26 | 0.16 | -0.21 | LINEARITY ERROR (dB) |
| 11 GHz    | 2071           | 49.9          | 84   | 323   | 560   | 812   | 1069  | 1330  | 1584 | 1824 | 2061  | Measured Value (mV)  |
|           |                |               | 11   | 0     | -12   | -11   | -3    | 8     | 13   | 3    | -9    | Error (mV)           |
|           |                |               | 0.21 | 0.00  | -0.25 | -0.22 | -0.06 | 0.17  | 0.26 | 0.06 | -0.18 | LINEARITY ERROR (dB) |
| 12 GHz    | 2062           | 49.3          | 105  | 337   | 570   | 817   | 1070  | 1327  | 1577 | 1819 | 2080  | Measured Value (mV)  |
|           |                |               | 15   | 1     | -13   | -12   | -6    | 4     | 9    | 4    | -2    | Error (mV)           |
|           |                |               | 0.31 | 0.02  | -0.26 | -0.25 | -0.12 | 0.09  | 0.17 | 0.08 | -0.04 | LINEARITY ERROR (dB) |
| 13 GHz    | 2079           | 48.9          | 141  | 369   | 597   | 842   | 1082  | 1343  | 1592 | 1855 | 2073  | Measured Value (mV)  |
|           |                |               | 19   | 3     | -14   | -14   | -8    | -2    | 2    | 21   | -6    | Error (mV)           |
|           |                |               | 0.38 | 0.05  | -0.29 | -0.28 | -0.17 | -0.04 | 0.05 | 0.42 | -0.13 | LINEARITY ERROR (dB) |
| 14 GHz    | 2055           | 48.1          | 152  | 375   | 597   | 840   | 1088  | 1331  | 1576 | 1830 | 2052  | Measured Value (mV)  |
|           |                |               | 19   | 3     | -16   | -13   | -6    | -3    | 2    | 16   | -2    | Error (mV)           |
|           |                |               | 0.40 | 0.05  | -0.32 | -0.27 | -0.12 | -0.07 | 0.04 | 0.33 | -0.05 | LINEARITY ERROR (dB) |
| 15 GHz    | 2058           | 47.3          | 183  | 402   | 620   | 863   | 1109  | 1347  | 1590 | 1836 | 2052  | Measured Value (mV)  |
|           |                |               | 18   | 1     | -18   | -11   | -3    | -1    | 5    | 15   | -7    | Error (mV)           |
|           |                |               | 0.39 | 0.01  | -0.37 | -0.24 | -0.06 | -0.02 | 0.11 | 0.31 | -0.14 | LINEARITY ERROR (dB) |
| 0 GHz     | 2031           | 46.9          | 173  | 390   | 605   | 847   | 1091  | 1325  | 1568 | 1806 | 2030  | Measured Value (mV)  |
|           |                |               | 19   | 2     | -19   | -11   | -2    | -2    | 6    | 9    | -1    | Error (mV)           |
|           |                |               | 0.40 | 0.03  | -0.40 | -0.24 | -0.03 | -0.05 | 0.12 | 0.20 | -0.03 | LINEARITY ERROR (dB) |
| 17 GHz    | 2012           | 46.7          | 160  | 379   | 589   | 833   | 1078  | 1308  | 1550 | 1784 | 2013  | Measured Value (mV)  |
|           |                |               | 18   | 3     | -20   | -10   | 1     | -3    | 5    | 6    | 1     | Error (mV)           |
|           |                |               | 0.38 | 0.06  | -0.44 | -0.21 | 0.01  | -0.06 | 0.12 | 0.12 | 0.02  | LINEARITY ERROR (dB) |
| 18 GHz    | 1959           | 46.6          | 113  | 333   | 541   | 778   | 1030  | 1252  | 1496 | 1729 | 1968  | Measured Value (mV)  |
|           |                |               | 19   | 6     | -19   | -15   | 3     | -7    | 3    | 3    | 8     | Error (mV)           |
|           |                |               | 0.41 | 0.12  | -0.41 | -0.32 | 0.07  | -0.16 | 0.06 | 0.05 | 0.18  | LINEARITY ERROR (dB) |

|                |       |
|----------------|-------|
| Average Slope  | 48.9  |
| Flatness ± dB  |       |
| Average Offset | 114.7 |

|     |     |     |     |      |      |      |      |      |
|-----|-----|-----|-----|------|------|------|------|------|
| 1.4 | 1.3 | 1.1 | 0.9 | 0.8  | 1    | 1    | 1.3  | 1.3  |
| 48  | 272 | 516 | 775 | 1030 | 1252 | 1496 | 1729 | 1968 |
| 183 | 402 | 620 | 863 | 1109 | 1347 | 1595 | 1859 | 2095 |





# SUMMARY TEST DATA ON SDLVA-8G18G-40-5-SFF +95°C

PL28824/2018

LOG TRANSFER VS FREQUENCY  
MODEL: SDLVA-8G18G-40-5-SFF  
TESTED BY: H. Gonzales  
SERIAL No. PL28824/2018  
Temp: 95°C

Tuesday, April 28, 2020  
10:25 AM

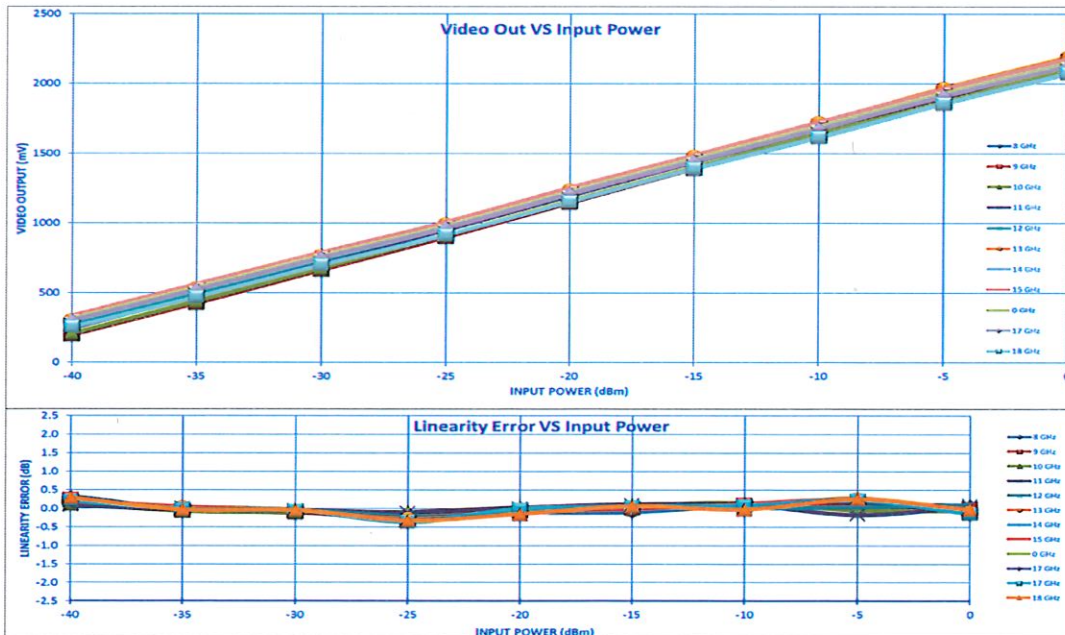


Frequency

| Frequency | INTERCEPT (mV) | SLOPE (mV/dB) | -40  | -35   | -30   | -25   | -20   | -15   | -10   | -5    | 0     | RF Input Power (dBm) |
|-----------|----------------|---------------|------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------|
| 8 GHz     | 2134           | 48.7          | 201  | 428   | 667   | 904   | 1154  | 1399  | 1651  | 1896  | 2138  | Measured Value (mV)  |
|           |                |               | 16   | -1    | -6    | -12   | -6    | -5    | 4     | 6     | 4     | Error (mV)           |
|           |                |               | 0.33 | -0.03 | -0.12 | -0.25 | -0.11 | -0.10 | 0.08  | 0.12  | 0.08  | LINEARITY ERROR (dB) |
| 9 GHz     | 2114           | 48.3          | 195  | 421   | 659   | 896   | 1144  | 1389  | 1637  | 1875  | 2115  | Measured Value (mV)  |
|           |                |               | 13   | -2    | -6    | -10   | -4    | 0     | 6     | 3     | 1     | Error (mV)           |
|           |                |               | 0.26 | -0.04 | -0.12 | -0.21 | -0.08 | -0.01 | 0.12  | 0.06  | 0.02  | LINEARITY ERROR (dB) |
| 10 GHz    | 2111           | 47.7          | 208  | 437   | 675   | 914   | 1158  | 1399  | 1641  | 1870  | 2107  | Measured Value (mV)  |
|           |                |               | 6    | -3    | -5    | -4    | 1     | 4     | 7     | -2    | -3    | Error (mV)           |
|           |                |               | 0.12 | -0.07 | -0.10 | -0.09 | 0.03  | 0.09  | 0.15  | -0.05 | -0.07 | LINEARITY ERROR (dB) |
| 11 GHz    | 2144           | 47.6          | 245  | 478   | 715   | 950   | 1194  | 1436  | 1673  | 1898  | 2147  | Measured Value (mV)  |
|           |                |               | 3    | -2    | -2    | -5    | 1     | 5     | 5     | -8    | 2     | Error (mV)           |
|           |                |               | 0.07 | -0.03 | -0.05 | -0.10 | 0.02  | 0.11  | 0.10  | -0.18 | 0.05  | LINEARITY ERROR (dB) |
| 12 GHz    | 2165           | 47.6          | 289  | 500   | 735   | 985   | 1208  | 1451  | 1689  | 1929  | 2170  | Measured Value (mV)  |
|           |                |               | 9    | 1     | -1    | -10   | -5    | 0     | 0     | 2     | 5     | Error (mV)           |
|           |                |               | 0.18 | 0.02  | -0.03 | -0.21 | -0.11 | 0.01  | 0.01  | 0.04  | 0.10  | LINEARITY ERROR (dB) |
| 13 GHz    | 2192           | 47.5          | 302  | 532   | 765   | 992   | 1237  | 1478  | 1718  | 1968  | 2189  | Measured Value (mV)  |
|           |                |               | 10   | 2     | -3    | -13   | -5    | -2    | 1     | 13    | -3    | Error (mV)           |
|           |                |               | 0.20 | 0.04  | -0.06 | -0.27 | -0.12 | -0.03 | 0.03  | 0.27  | -0.07 | LINEARITY ERROR (dB) |
| 14 GHz    | 2177           | 46.9          | 312  | 538   | 769   | 991   | 1236  | 1473  | 1711  | 1954  | 2174  | Measured Value (mV)  |
|           |                |               | 10   | 1     | -2    | -14   | -4    | -1    | 2     | 12    | -3    | Error (mV)           |
|           |                |               | 0.20 | 0.03  | -0.04 | -0.31 | -0.08 | -0.03 | 0.05  | 0.25  | -0.07 | LINEARITY ERROR (dB) |
| 15 GHz    | 2182           | 46.4          | 334  | 560   | 787   | 1006  | 1252  | 1486  | 1724  | 1961  | 2176  | Measured Value (mV)  |
|           |                |               | 8    | 2     | -3    | -16   | -2    | 0     | 6     | 11    | -6    | Error (mV)           |
|           |                |               | 0.18 | 0.04  | -0.06 | -0.34 | -0.04 | -0.01 | 0.12  | 0.23  | -0.13 | LINEARITY ERROR (dB) |
| 16 GHz    | 2148           | 46.1          | 312  | 533   | 762   | 977   | 1223  | 1458  | 1690  | 1928  | 2142  | Measured Value (mV)  |
|           |                |               | 10   | 0     | -2    | -17   | -2    | 2     | 4     | 11    | -6    | Error (mV)           |
|           |                |               | 0.22 | 0.00  | -0.04 | -0.37 | -0.05 | 0.05  | 0.08  | 0.24  | -0.13 | LINEARITY ERROR (dB) |
| 17 GHz    | 2130           | 46            | 300  | 520   | 748   | 964   | 1210  | 1443  | 1674  | 1911  | 2124  | Measured Value (mV)  |
|           |                |               | 10   | -1    | -2    | -16   | -1    | 3     | 3     | 11    | -6    | Error (mV)           |
|           |                |               | 0.21 | -0.01 | -0.04 | -0.36 | -0.01 | 0.06  | 0.07  | 0.23  | -0.14 | LINEARITY ERROR (dB) |
| 18 GHz    | 2074           | 45.8          | 254  | 468   | 697   | 913   | 1151  | 1390  | 1615  | 1857  | 2073  | Measured Value (mV)  |
|           |                |               | 13   | -1    | -2    | -15   | -7    | 3     | -1    | 12    | -1    | Error (mV)           |
|           |                |               | 0.29 | -0.03 | -0.04 | -0.32 | -0.15 | 0.07  | -0.03 | 0.25  | -0.03 | LINEARITY ERROR (dB) |

Average Slope 47.2  
Flatness ± dB  
Average Offset 266.6

| 1.5 | 1.5 | 1.4 | 1.2  | 1.1  | 1    | 1.2  | 1.2  | 1.2  |
|-----|-----|-----|------|------|------|------|------|------|
| 195 | 421 | 659 | 896  | 1144 | 1389 | 1615 | 1857 | 2073 |
| 334 | 560 | 787 | 1006 | 1252 | 1486 | 1724 | 1968 | 2189 |

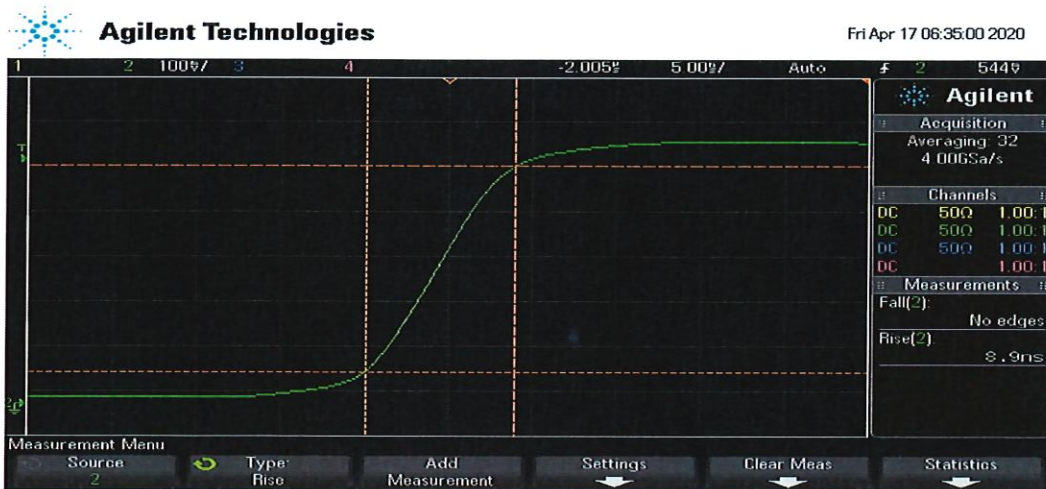




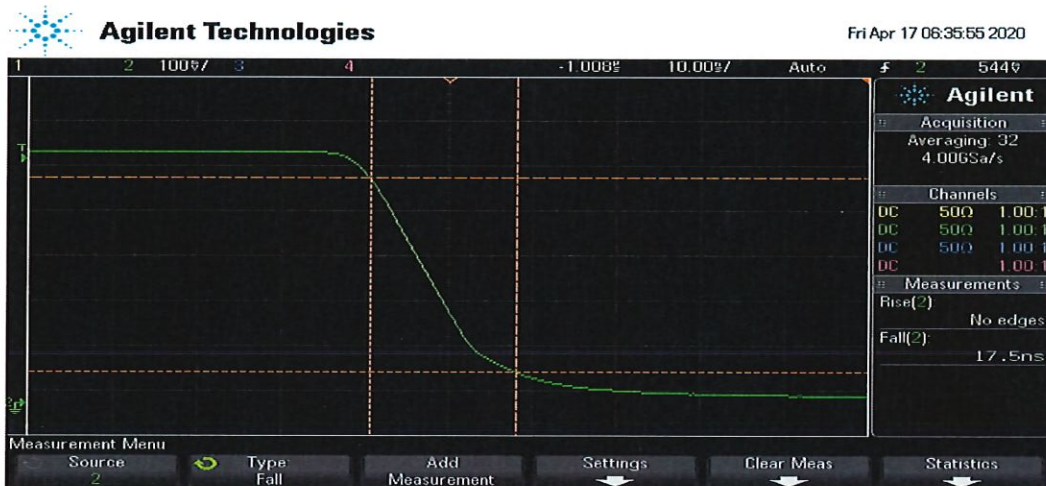
**SUMMARY TEST DATA  
ON  
SDLVA-8G18G-40-5-SFF**

PL28824/2018

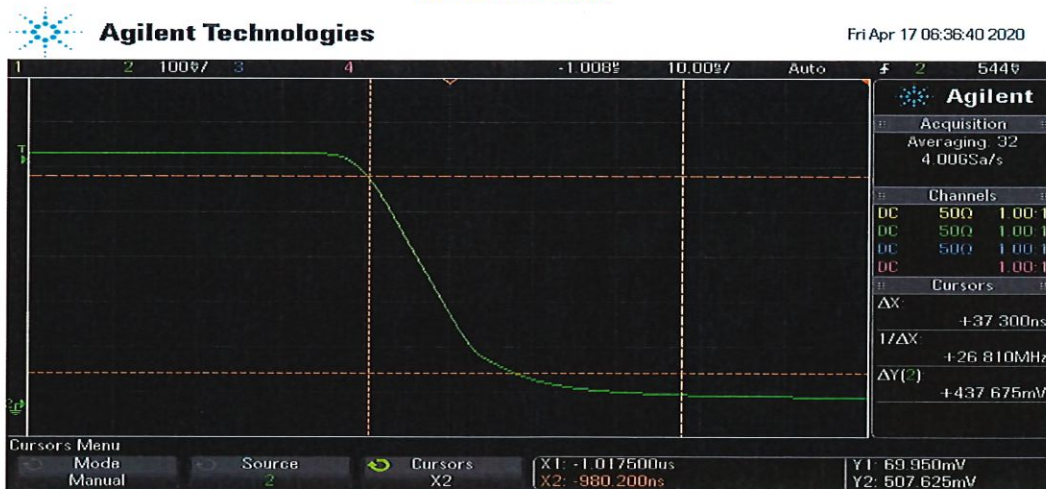
Rise Time



Fall Time



Recovery Time





# SUMMARY TEST DATA ON SDLVA-8G18G-40-5-SFF

PL28824/2018

## VSWR

