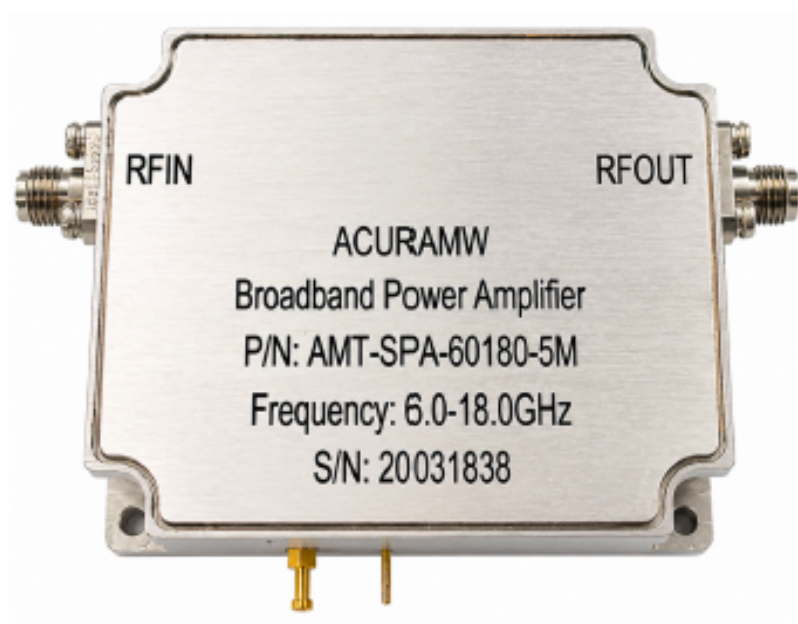


**6.0-18.0GHz-5W**

**Broadband Power Amplifier  
Test Report**



**June, 2026**

## 1. Description

Product Name: Solid-State High-Power Amplifier Module;

Model No.: AMT-SPA-60180-5M;

Series No.: 20031838

Quantity: 1 unit

## 2. Inspection Basis

6.0-18.0GHz 5W spec.

## 3. Test Instruments List

| No. | Equipment Name    | Instrument Model | QTY   | Remarks |
|-----|-------------------|------------------|-------|---------|
| 1   | VNA               | P9357A           | 1 Set |         |
| 2   | Spectrum Analyzer | N9020A           | 1 Set |         |
| 3   | Signal Generator  | N5173B           | 1 Set |         |

## 4. Specifications Test Table

| No. | Technique Spec.s                      | Technique Spec.s | Test Result     | Remarks |
|-----|---------------------------------------|------------------|-----------------|---------|
| 1   | Frequency range                       | 6-18 GHz         | 6-18            |         |
| 2   | Power gain                            | $\geq 37$ dB     | $> 37.89$ dB    |         |
| 3   | Gain Flatness                         | $\leq \pm 2$     | $\leq \pm 1.87$ |         |
| 4   | Output power Saturation               | $\geq 37$ dBm    | $> 37$ dBm      |         |
| 5   | Input VSWR                            | $\leq 2:1$       | 1.62            |         |
| 6   | Max. Input power level<br>(no damage) | $\leq 10$ dBm    | 10              |         |
| 7   | Spurious signals                      | $\leq -60$ dBc   | -65             |         |

| No. | Technique Spec.s                        | Technique Spec.s | Test Result | Remarks |
|-----|-----------------------------------------|------------------|-------------|---------|
| 8   | Operating voltage                       | +28V             | +28V        |         |
| 9   | Operating current                       | Typ 2 A          | Typ 2 A     |         |
| 10  | Input and output RF Impedance           | Typ50 $\Omega$   | 50          |         |
| 11  | Load Mismatch<br>(VSWR, No Degradation) | $\leq 5:1$       | Compliant   |         |

## 5. Mechanical specification

| No. | parameter           | Specification                  | Inspection Result              | Remark |
|-----|---------------------|--------------------------------|--------------------------------|--------|
| 1   | Dimension (WxDxH)   | 60×50×15 mm                    | 60.02 x 49.92 x 15.08mm        |        |
| 2   | Weight              | 0.2 Kg maximum                 | 0.09Kg                         |        |
| 3   | RF connector input  | Type-SMA, Female               | SMA -F                         |        |
| 4   | RF connector output | Type-SMA, Female               | SMA -F                         |        |
| 5   | Power Supply        | Feed-through                   | Feed-through                   |        |
| 6   | Cooling             | External heatsink (not supply) | External heatsink (not supply) |        |

## 6. Environmental characteristics

| No. | parameter                  | Specification | Inspection Result | Remark |
|-----|----------------------------|---------------|-------------------|--------|
| 1   | Operating temperature      | -30~+75 °C    | Compliant         |        |
| 2   | Non- operating temperature | -40~+85 °C    | Compliant         |        |

## 7. Conclusion

Based on the comprehensive testing conducted on the solid-state high-power amplifier module, the product's performance specification fully comply with the technical specifications outlined in the Technical Agreement for Solid-State High-Power Amplifier Modules.

## 8. +25 °C Test Data

| No. | parameter                                       | Unit | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data |
|-----|-------------------------------------------------|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1   | Frequency                                       | GHz  | 6         | 6.1       | 6.3       | 6.4       | 6.5       | 6.6       | 6.7       | 6.8       | 6.9       | 7.0       | 7.1       | 7.2       | 7.3       |
| 2   | Output power Saturation @Input power level 0dBm | dBm  | 40        | 39.9      | 39.9      | 39.6      | 39.3      | 39        | 38.6      | 38.4      | 38.3      | 38.2      | 38.5      | 38.9      | 39.2      |
| 3   | Operating current                               | A    | 1.66      | 1.72      | 1.75      | 1.81      | 1.84      | 1.86      | 1.88      | 1.9       | 1.92      | 1.93      | 1.94      | 1.96      | 1.98      |
| 4   | Frequency                                       | GHz  | 7.4       | 7.5       | 7.6       | 7.7       | 7.8       | 7.9       | 8.0       | 8.1       | 8.2       | 8.3       | 8.4       | 8.5       | 8.6       |
| 5   | Output power Saturation @Input power level 0dBm | dBm  | 39.3      | 39.7      | 39.8      | 40.3      | 40.5      | 40.9      | 41.3      | 41.8      | 41.9      | 41.9      | 41.9      | 42        | 42        |
| 6   | Operating current                               | A    | 2         | 2         | 2.01      | 2.01      | 2.02      | 1.99      | 1.93      | 1.84      | 1.83      | 1.8       | 1.78      | 1.77      | 1.73      |
| 7   | Frequency                                       | GHz  | 8.7       | 8.8       | 8.9       | 9.0       | 9.1       | 9.2       | 9.3       | 9.4       | 9.5       | 9.6       | 9.7       | 9.8       | 9.9       |
| 8   | Output power Saturation @Input power level 0dBm | dBm  | 42        | 41.6      | 41.6      | 41.4      | 41.4      | 41        | 41        | 40.9      | 40.6      | 40.4      | 40.6      | 40.4      | 40.1      |
| 9   | Operating current                               | A    | 1.75      | 1.68      | 1.68      | 1.68      | 1.72      | 1.74      | 1.77      | 1.79      | 1.82      | 1.85      | 1.85      | 1.85      | 1.87      |
| 10  | Frequency                                       | GHz  | 10.0      | 10.1      | 10.2      | 10.3      | 10.4      | 10.5      | 10.6      | 10.7      | 10.8      | 10.9      | 11.0      | 11.1      | 11.2      |
| 11  | Output power Saturation @Input power level 0dBm | dBm  | 39.8      | 39.6      | 39.9      | 40.1      | 39.9      | 39.9      | 39.9      | 40        | 40.1      | 39.9      | 40.2      | 40.3      | 40.4      |
| 12  | Operating current                               | A    | 1.91      | 1.89      | 1.93      | 1.93      | 1.95      | 1.95      | 1.97      | 1.98      | 1.99      | 1.98      | 2.01      | 2.01      | 2.03      |
| 13  | Frequency                                       | GHz  | 11.3      | 11.4      | 11.5      | 11.6      | 11.7      | 11.8      | 11.9      | 12.0      | 12.1      | 12.2      | 12.3      | 12.4      | 12.5      |
| 14  | Output power Saturation @Input power level 0dBm | dBm  | 39.8      | 39.9      | 39.6      | 39.8      | 39.9      | 40.1      | 40.1      | 40.7      | 40.6      | 40.7      | 40        | 39.9      | 40.1      |
| 15  | Operating current                               | A    | 2.05      | 2.06      | 2.06      | 2.04      | 2.04      | 2.03      | 2.01      | 2         | 2.02      | 2.02      | 2.02      | 2         | 1.99      |

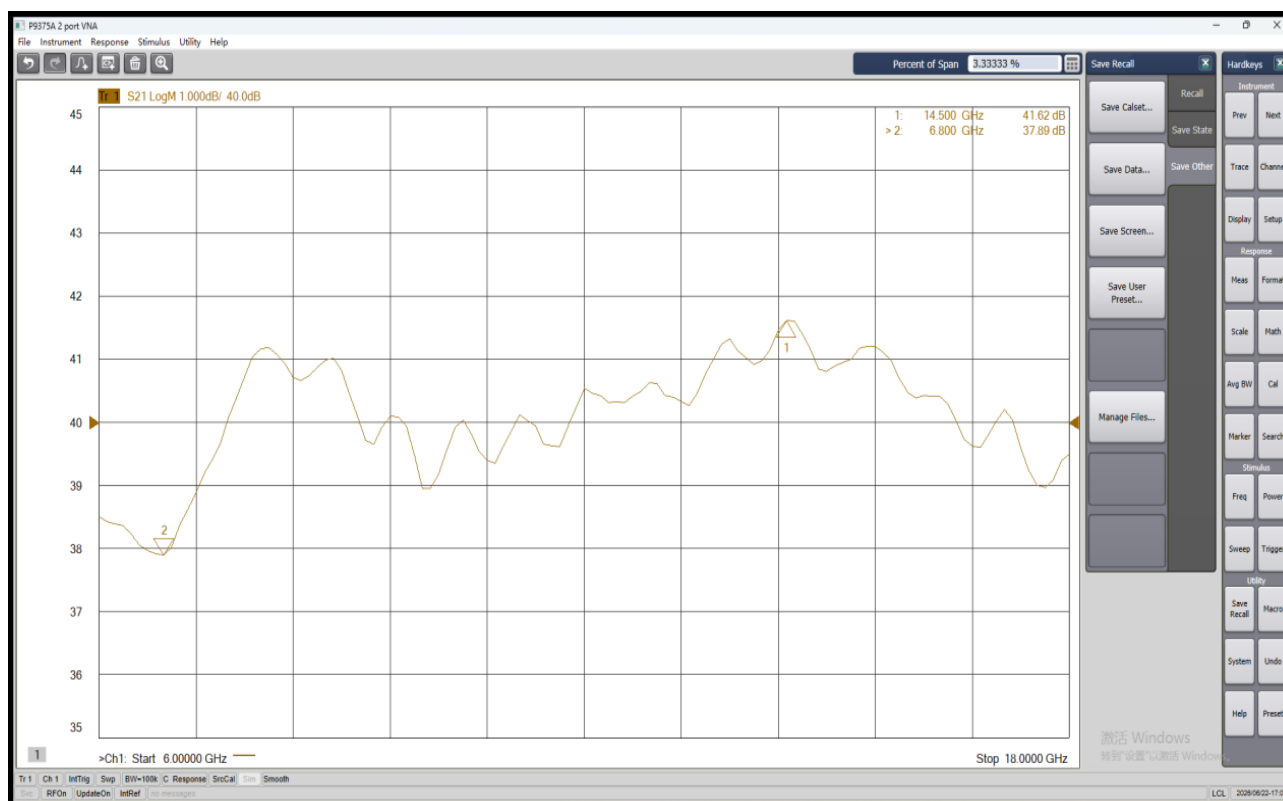
## 8. +25 °C Test Data

| No. | parameter                                       | Unit | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data | Test Data |
|-----|-------------------------------------------------|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 16  | Frequency                                       | GHz  | 12.6      | 12.7      | 12.8      | 12.9      | 13.0      | 13.1      | 13.2      | 13.3      | 13.4      | 13.5      | 13.6      | 13.7      | 13.8      |
| 17  | Output power Saturation @Input power level 0dBm | dBm  | 40.4      | 40.5      | 40.6      | 40.8      | 40.8      | 40.6      | 40.5      | 40.6      | 40.4      | 41.1      | 41.2      | 41        | 41.4      |
| 18  | Operating current                               | A    | 2         | 1.97      | 2         | 1.98      | 1.99      | 2         | 2.01      | 2         | 2.03      | 2         | 2.06      | 2.04      | 2.05      |
| 19  | Frequency                                       | GHz  | 13.9      | 14.0      | 14.1      | 14.2      | 14.3      | 14.4      | 14.5      | 14.6      | 14.7      | 14.8      | 14.9      | 15.0      | 15.1      |
| 20  | Output power Saturation @Input power level 0dBm | dBm  | 41.1      | 41.4      | 41.8      | 42        | 41.9      | 41.7      | 41.1      | 41.7      | 41.6      | 42        | 41.6      | 41.6      | 41.8      |
| 21  | Operating current                               | A    | 2.07      | 2.07      | 2.08      | 2.08      | 2.1       | 2.12      | 2.12      | 2.1       | 2.11      | 2.1       | 2.13      | 2.09      | 2.1       |
| 22  | Frequency                                       | GHz  | 15.2      | 15.3      | 15.4      | 15.5      | 15.6      | 15.7      | 15.8      | 15.9      | 16.0      | 16.1      | 16.2      | 16.3      | 16.4      |
| 23  | Output power Saturation @Input power level 0dBm | dBm  | 41.7      | 41.9      | 41.9      | 41.8      | 42.1      | 42        | 42        | 41.8      | 41.8      | 41.5      | 41.7      | 41.6      | 41.1      |
| 24  | Operating current                               | A    | 2.07      | 2.08      | 2.07      | 2.05      | 1.98      | 2         | 1.97      | 1.93      | 1.93      | 1.88      | 1.89      | 1.89      | 1.83      |
| 25  | Frequency                                       | GHz  | 16.5      | 16.6      | 16.7      | 16.8      | 16.9      | 17.0      | 17.1      | 17.2      | 17.3      | 17.4      | 17.5      | 17.6      | 17.7      |
| 26  | Output power Saturation @Input power level 0dBm | dBm  | 41.1      | 41        | 41.6      | 41        | 40.1      | 41        | 40.3      | 40.2      | 40        | 40.3      | 40.6      | 40.4      | 40.5      |
| 27  | Operating current                               | A    | 1.83      | 1.82      | 1.81      | 1.81      | 1.83      | 1.85      | 1.87      | 1.85      | 1.86      | 1.82      | 1.84      | 1.85      | 1.86      |
| 28  | Frequency                                       | GHz  | 17.8      | 17.9      | 18.0      |           |           |           |           |           |           |           |           |           |           |
| 29  | Output power Saturation @Input power level 0dBm | dBm  | 40.5      | 40.4      | 41.1      |           |           |           |           |           |           |           |           |           |           |
| 30  | Operating current                               | A    | 1.86      | 1.86      | 1.87      |           |           |           |           |           |           |           |           |           |           |

| No. | parameter        | Specification | Test Result |
|-----|------------------|---------------|-------------|
| 31  | Spurious signals | ≤-60 dBc      | -65         |
| 32  | Input VSWR       | ≤2:1          | 1.61        |

## 9. Photos and Test Result

### 9.1 Power Gain



## 9.2 Input VSWR

