

Product Features

- Operation across 450MHz to 880MHz
- 40Watts P3dB typical
- 35dB typical small signal gain
- GaN HFET

Application

- UHF Television



Description

The RFW8835H40-28 is designed for Wideband Power Amplifier application frequencies from 450 to 880MHz. This module uses GaN HEMT technology which performs high breakdown voltage, high linearity, wide bandwidth and high efficiency.

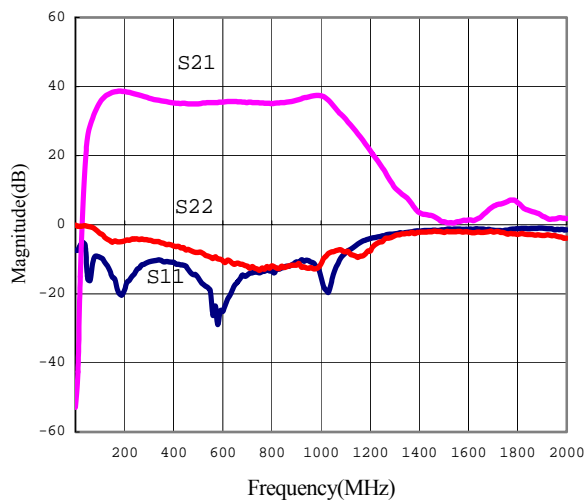
Typical Specifications

| Ref. | CHARACTERISTIC | CONDITIONS | Min. | Typ. | Max. | Units |
|------|--|-------------------|------|------|------|-------|
| 1. | Bandwidth | | 450 | | 880 | MHz |
| 2. | Gain | | 33 | 35 | 36 | dB |
| 3. | Gain variation vs temperature | -20°C to 60°C | | ±1 | | dB |
| 4. | Gain variation vs frequency | | | ±0.5 | | dBpp |
| 5. | P _{3dB} | 450MHz to 880 MHz | | 46 | | dBm |
| 6. | OIP3 | 450MHz to 880 MHz | 51 | 53 | | dBm |
| 7. | ACLR@Pout=28.5dBm W-CDMA,64PCH,4FA Spectrum Analyzer Setting : RBW=30KHz, VBW=100Hz | △=5MHz | | 47 | | dBc |
| | | △=10MHz | | 50 | | |
| 8. | Noise figure | | | | 7 | dB |
| 9. | Input Return Loss | | | -13 | | dB |
| 10. | Output Return Loss | | | -8 | | dB |
| 11. | Supply voltage | | | +28 | | V |
| 12. | Quiescent Current consumption | | | 3.1 | | A |
| 13. | Worst Case Current at P3dB Pout | | | 4.0 | 5.0 | |
| 14. | Shut down | | | 5.0 | | V |

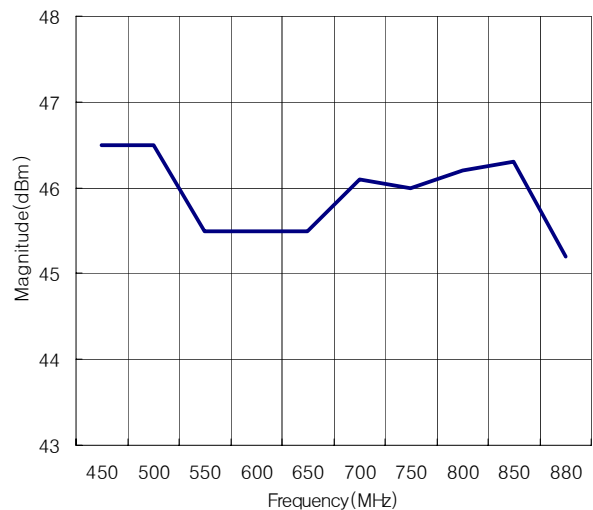
RFW8835H40-28 Typical Performance @ 25 °C

| Frequency (MHz) | P1dB (dBm) | P3dB (dBm) | Current@P1dB (A) | Current@P3dB (A) | Gain (dB) | OIP3 (dBm) | N.F (dB) |
|-----------------|------------|------------|------------------|------------------|-----------|------------|----------|
| 450 | 45 | 46.5 | 3.72 | 4.34 | 35 | 56 | 4.6 |
| 500 | 44.5 | 46.5 | 3.59 | 4.79 | 35 | 55 | 4 |
| 550 | 44.2 | 45.5 | 3.46 | 4.06 | 35.4 | 54.4 | 4 |
| 600 | 45 | 45.5 | 3.54 | 3.79 | 35.5 | 54.3 | 4 |
| 650 | 45 | 45.5 | 3.58 | 3.68 | 35.5 | 53.8 | 4 |
| 700 | 45 | 46.1 | 3.71 | 4.1 | 35.3 | 53.7 | 3.9 |
| 750 | 45 | 46 | 3.56 | 3.89 | 35.1 | 53.3 | 4.2 |
| 800 | 45.1 | 46.2 | 3.64 | 4.02 | 35.1 | 53.5 | 4.6 |
| 850 | 45 | 46.3 | 3.59 | 4 | 35.4 | 54.5 | 4.8 |
| 880 | 44.1 | 45.2 | 3.47 | 3.76 | 35.6 | 54.5 | 4.3 |

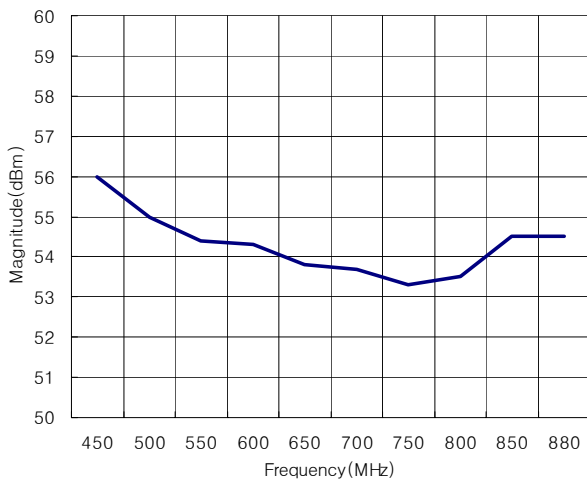
S-Parameter



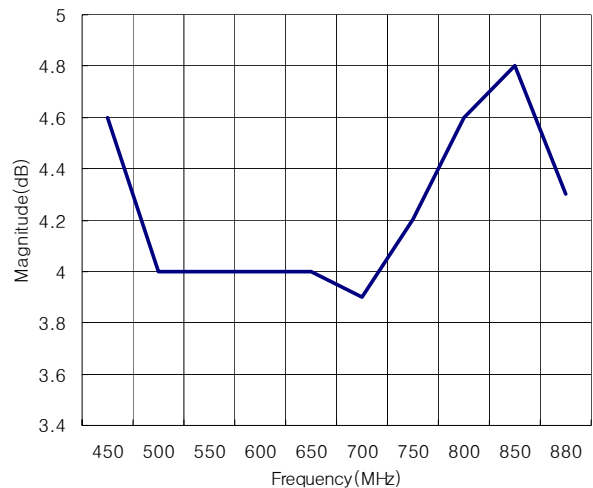
P3dB



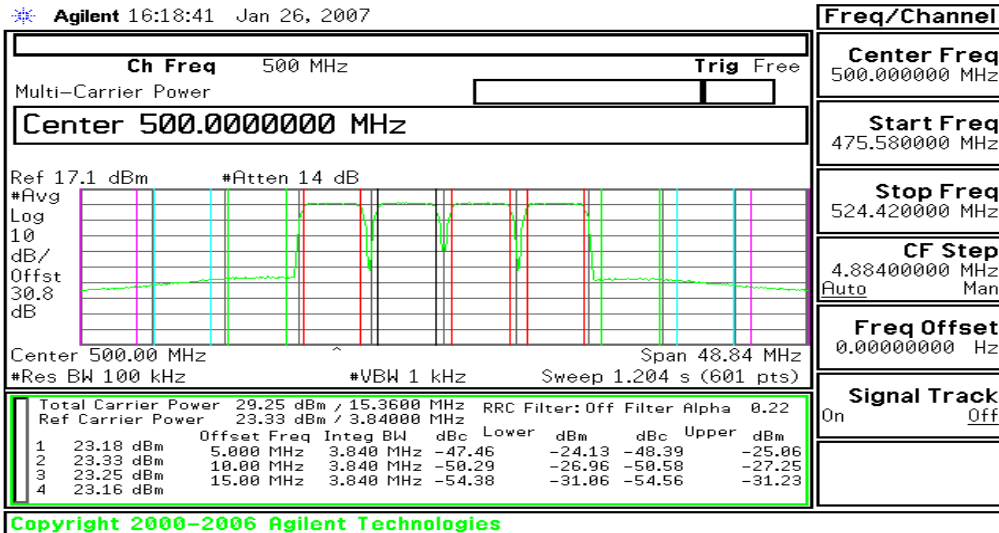
OIP3



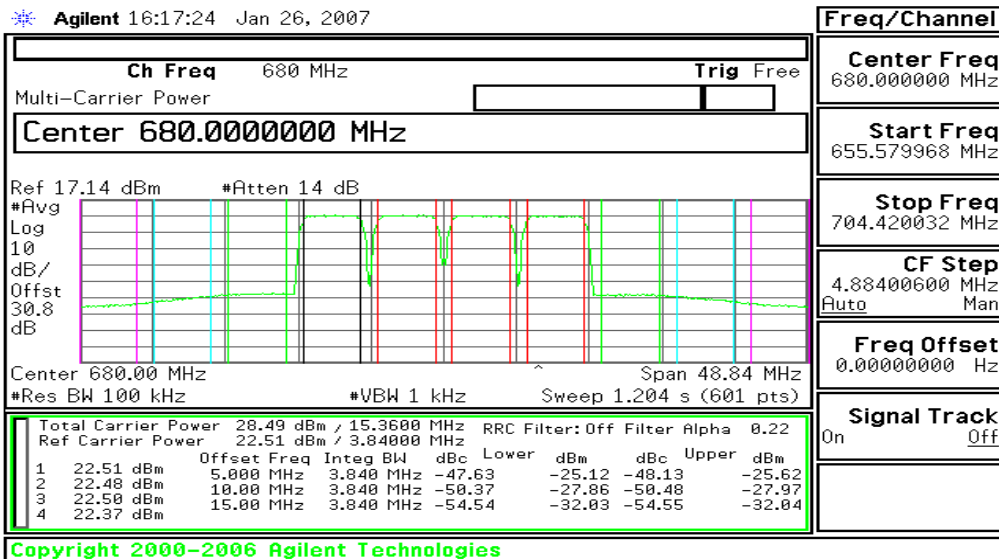
Noise Figure



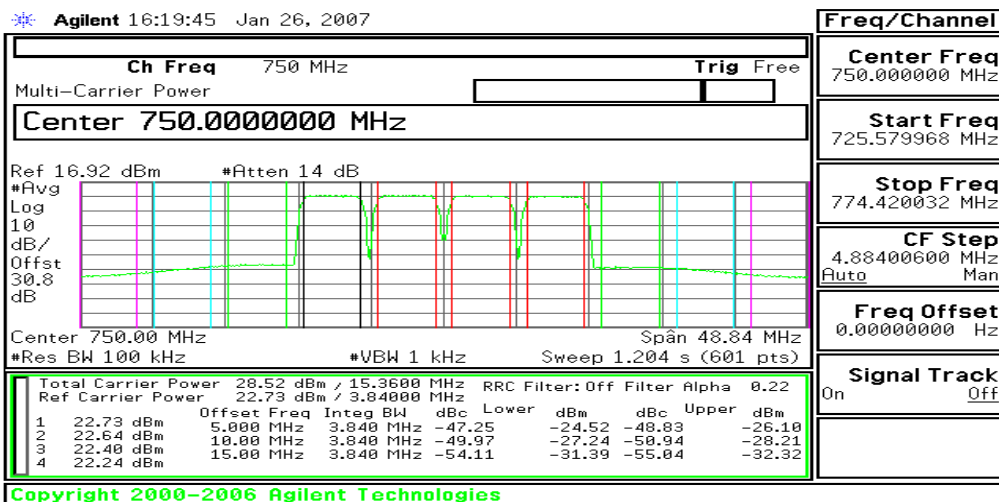
W-CDMA,64PCH,4FA ACLR



| Freq/Channel | |
|--------------|----------------------------|
| Center Freq | 500.000000 MHz |
| Start Freq | 475.580000 MHz |
| Stop Freq | 524.420000 MHz |
| CF Step | 4.88400000 MHz Auto Man |
| Freq Offset | 0.00000000 Hz |
| Signal Track | On Off |

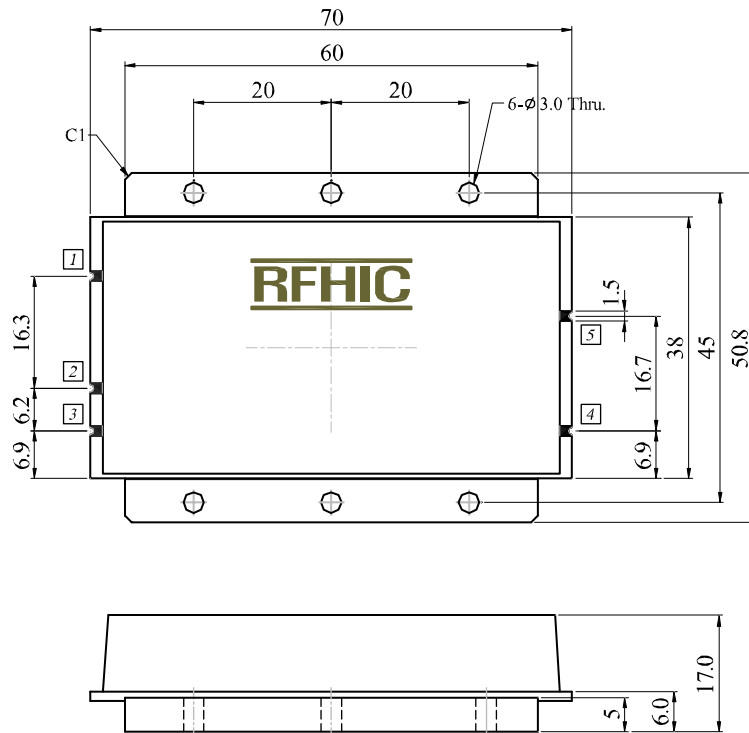


| Freq/Channel | |
|--------------|----------------------------|
| Center Freq | 680.000000 MHz |
| Start Freq | 655.579968 MHz |
| Stop Freq | 704.420032 MHz |
| CF Step | 4.88400000 MHz Auto Man |
| Freq Offset | 0.00000000 Hz |
| Signal Track | On Off |



| Freq/Channel | |
|--------------|----------------------------|
| Center Freq | 750.000000 MHz |
| Start Freq | 725.579968 MHz |
| Stop Freq | 774.420032 MHz |
| CF Step | 4.88400000 MHz Auto Man |
| Freq Offset | 0.00000000 Hz |
| Signal Track | On Off |

Dimensions in mm



Footprint for easy maintenance

