



IPA038053N

380 - 530 MHz, 1 W POWER AMPLIFIER

REV B
July 2015

Key Features



- 380 ~ 530 MHz, 50 Ohm Impedance
- 30 dBm P_{1dB}
- 17 dB Gain
- 1.6:1 VSWR
- 43 dBm IP₃
- Precision Machined Housing
- Single DC Power Supply
- Meet MIL-STD-202g

Applications

- UHF
- PA Driver Amplifiers
- RF Bench Tests
- Fixed Wireless Applications



Absolute Maximum Ratings

| Parameters | Units | Ratings |
|-------------------------|-------|-----------|
| DC Power Supply Voltage | V | -0.5, 16 |
| RF Input CW Power | dBm | 24 |
| Storage Temperature | °C | -40 ~ +85 |
| Operating Temperature | °C | -40 ~ +85 |

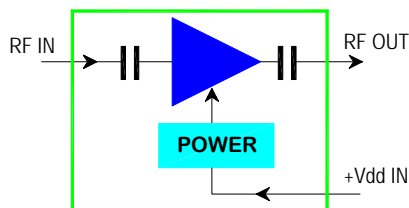
Additional heat sink is required for continuous operation!

Specifications

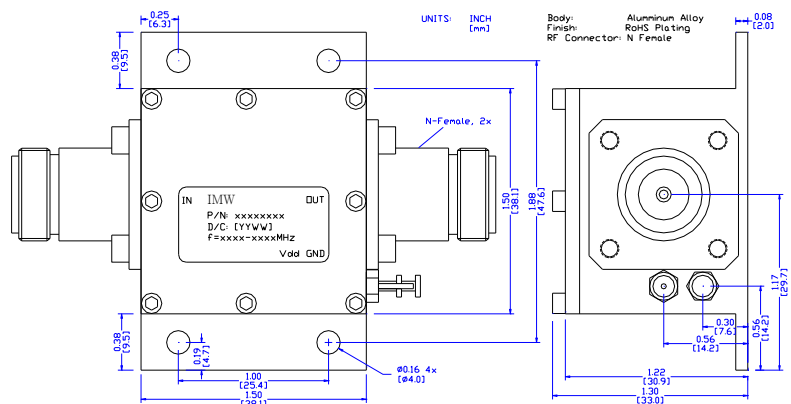
Summary of the key electrical specifications at 25°C

| Index | Testing Item | Symbol | Test Constraints | Min | Nom | Max | Unit |
|-------|---------------------------------------|-------------------|--|-----|---------|-----|-------|
| 1 | Frequency Range | BW | 50 Ohm Impedance | 380 | | 530 | MHz |
| 2 | Gain | S ₂₁ | 380 – 530 MHz | 16 | 17 | 18 | dB |
| 3 | Gain Variation | ΔG | 380 – 530 MHz | | +/- 0.2 | | dB |
| 4 | VSWR | SWR _i | 380 – 530 MHz all RF ports | | 1.5:1 | 2:1 | Ratio |
| 5 | Reverse Isolation | S ₁₂ | 380 – 530 MHz | | 25 | | dB |
| 6 | Noise Figure | NF | 380 – 530 MHz | | 2.5 | | dB |
| 7 | Output Power 1dB Compression Point | P _{1dB} | 380 – 530 MHz | 28 | 30 | | dBm |
| 8 | Output-Third-Order Interception Point | IP ₃ | Two-Tone, P _{out} = 10 dBm each, 1 MHz Separation | 40 | 43 | | dBm |
| 9 | Current Consumption | I _{dd} | V _{dd} = +12.0 V | | 220 | | mA |
| 10 | Power Supply Operating Voltage | V _{dd} | | +12 | | +16 | V |
| 11 | Operating Temperature | T _o | | -40 | | +85 | °C |
| 12 | Thermal Resistance | R _{th,c} | Junction to case | | | 32 | °C/W |

Functional Block Diagram



Outline, IP-2 Housing



Ordering Information

| Model Number | Connectors | |
|--------------|------------|----------|
| | IN | OUT |
| IPA038053N | N Female | N Female |

Specifications and information are subject to change without notice.

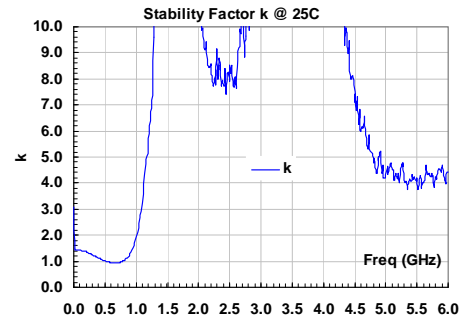
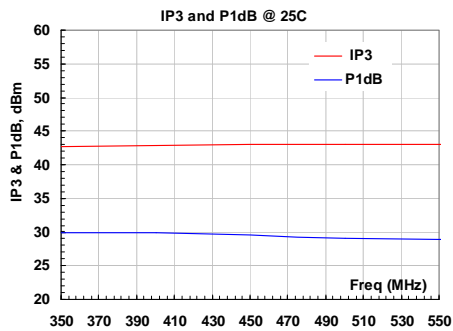
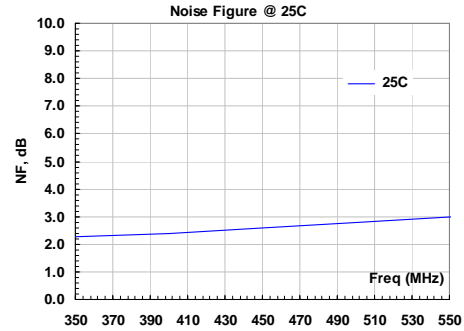
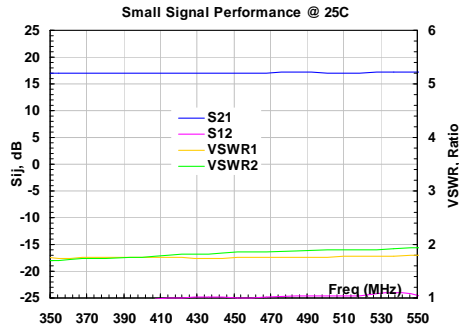


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Typical Data



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