

Integra
TECHNOLOGIES, INC.

High technology
radio frequency power
semiconductor



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Integra

TECHNOLOGIES, INC.

Integra's mission is to be the global technological leader in the design, development and manufacture of high performance RF power transistors serving the radar, avionics and wireless communications industries.

Integra excels by providing the highest power, gain and efficiency devices available. Extensive technical support and application specific designs make Integra the preferred choice for your system.

It Starts with a Strong Foundation

Founded in 1997 Integra Technologies has years of proven leadership in high performance and high reliability product. Our manufacturing expertise with high reliability gold metallization wafer fabrication techniques provide the foundation for designing superior RF products for the demanding military and aerospace markets. Integra RF engineers continue to make innovative products ranging from discrete RF transistors, integrated modules to complete multi-kilowatt power amplifiers. Our expert engineering background coupled with our design flexibility, well suited to meet changing market demands, makes Integra Technologies the clear leader in RF performance and repeatability.

Why Integra Technologies?

History of Success – Founded in 1997 with patented state-of-the-art technology we heavily invest in R&D to continue to advance our technology to keep pace with demanding markets.

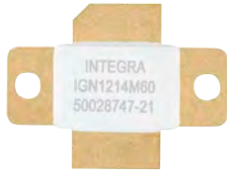
Proven Supplier / Defense markets expect 10-20 year product life cycles and Integra Technologies has decade long relationships with multiple Tier 1 Defense Contractors.

Diverse Product Portfolio / The only RF semiconductor manufacturer that can provide discrete packaged transistor, integrated pallet modules and complete power amplifier solutions.

Why GaN Technology?

The advanced Gallium Nitride on Silicon Carbide technology has excellent thermal conductivity providing high reliability solutions. The high power density of GaN-on-SiC technology: enables smaller products that save board space thus saving system cost and provides higher impedances which are easier to match across a broad band of frequency spectrum. Radar applications from UHF, L-band, S-band and C-band are well served with the high frequency operation of the wide band-gap technology.

L-Band Radar Products



IGN1214M60

- Output Power \geq 60W
- Gain = 19dB typical
- Efficiency = 60% typical
- Frequency: 1.2-1.4GHz
PW = 300 μ s, DF = 10%
- VDD = 50V, IDQ = 100mA



IGN1214M500

- Output Power \geq 500W
- Gain = 14dB typical
- Efficiency = 65% typical
- Frequency: 1.2-1.4GHz
PW = 300 μ s, DF = 10%
- VDD = 50V, IDQ = 50mA

S-Band Radar Products



IGT2735M30

- Output Power \geq 30W
- Gain = 12dB typical
- Efficiency = 52% typical
- Frequency: 2.7-3.5GHz
PW = 300 μ s, DF = 10%
- VDD = 32V, IDQ = 50mA



IGN2731M200

- Output Power \geq 200W
- Gain = 13dB typical
- Efficiency = 54% typical
- Frequency: 2.7-3.1GHz
PW = 300 μ s, DF = 10%
- VDD = 44V, IDQ = 50mA



IGN3135M135

- Output Power \geq 150W
- Gain = 13dB typical
- Efficiency = 60% typical
- Frequency: 3.1-3.5GHz
PW = 300 μ s, DF = 10%
- VDD = 50V, IDQ = 50mA

C-Band Radar Products



IGN4450M50

- Output Power > 50W
- Gain = 14dB typical
- Efficiency = 50% typical
- Frequency = 4.4-5.0GHz
PW = 300 μ s, DF = 10%
- VDD = 36V, IDQ = 40mA



IGN5259M40

- Output Power \geq 40W
- Gain: 12dB typical
- Efficiency: 45% typical
- Frequency: 5.2-5.9GHz
PW = 300 μ s, DF = 10%
- VDD = 36V, IDQ = 40mA



IGN4450M90

- Output Power \geq 90W
- Gain: 12.5dB typical
- Efficiency: 50% typical
- Frequency: 4.4-5.0GHz
PW = 300 μ s, DF = 10%
- VDD = 36V, IDQ = 80mA



IGN5259M80

- Output Power \geq 80W
- Gain: 11.5dB typical
- Efficiency: 42% typical
- Frequency: 5.2-5.9GHz
PW = 300 μ s, DF = 10%
- VDD = 36V, IDQ = 80mA

| Part Number | Frequency band | Output power | PW/DC | Gain | Efficiency | Voltage |
|-------------|----------------|--------------|-------|------|------------|---------|
|-------------|----------------|--------------|-------|------|------------|---------|

Broadband Communications Products

| | | | | | | |
|--------------|-------------|------|----|------|-----|-----|
| IGN0110CW100 | 100-1000MHz | 100W | CW | 12dB | 50% | 28V |
|--------------|-------------|------|----|------|-----|-----|

L Band Avionics Products

| | | | | | | |
|-------------|---------|------|--------------|------|-----|-----|
| IGN1030M800 | 1030MHz | 800W | 100 us, 2% | 17db | 50% | 50V |
| IGN1030L800 | 1030MHz | 800W | 2.4 ms, 6.4% | 17db | 65% | 50V |
| IGN1090M800 | 1090MHz | 800W | 100 us, 2% | 16db | 50% | 50V |

L Band Radar Products

| | | | | | | |
|-------------|------------|------|------------|------|-----|-----|
| IGN1214M60 | 1.2-1.4GHz | 60W | 300µs, 10% | 19dB | 60% | 50V |
| IGN1214M250 | 1.2-1.4GHz | 250W | 300µs, 10% | 14dB | 65% | 50V |
| IGN1214M500 | 1.2-1.4GHz | 500W | 300µs, 10% | 14dB | 65% | 50V |

S Band Radar Products

| | | | | | | |
|--------------|-------------|------|------------|--------|-----|-----|
| IGN2123L180 | 2.1-2.3GHz | 180W | 1ms, 30% | 15dB | 55% | 42V |
| IGN2325CW140 | 2.3-2.5GHz | 140W | CW | 15dB | 52% | 32V |
| IGN2729M250 | 2.7-2.9GHz | 250W | 300µs, 10% | 11dB | 59% | 36V |
| IGN2729M400 | 2.7-2.9GHz | 400W | 300µs, 10% | 11.2dB | 68% | 50V |
| IGN2729M500 | 2.7-2.9GHz | 500W | 300µs, 10% | 12dB | 60% | 50V |
| IGN2729MA800 | 2.7-2.9GHz | 800W | 300µs, 5% | 10.5dB | 60% | 50V |
| IGN2730M65 | 2.7-3.0GHz | 65W | 300µs, 10% | 12dB | 60% | 32V |
| IGN2731M10 | 2.7-3.1GHz | 10W | 300us, 10% | 15.5dB | 48% | 40V |
| IGN2731M80 | 2.7-3.1GHz | 80W | 100µs, 10% | 13.5dB | 50% | 40V |
| IGN2731M200 | 2.7-3.1GHz | 200W | 300µs, 10% | 13dB | 54% | 44V |
| IGN2731M200A | 2.7-3.1GHz | 200W | 100µs, 10% | 13.5dB | 55% | 44V |
| IGN2731L200 | 2.7-3.1GHz | 200W | 3ms, 30% | 13dB | 54% | 42V |
| IGT2735M30 | 2.7-3.5GHz | 30W | 300µs, 10% | 11dB | 50% | 32V |
| IGT2735M80 | 2.7-3.5GHz | 80W | 300us, 10% | 11dB | 50% | 32V |
| IGN2735M250 | 2.7-3.5GHz | 250W | 300µs, 10% | 11dB | 50% | 32V |
| IGN2932M10 | 2.9-3.2GHz | 10W | 100µs, 10% | 14dB | 50% | 40V |
| IGN2932M75 | 2.9-3.2GHz | 75W | 100µs, 10% | 14dB | 50% | 45V |
| IGN3135L115 | 3.1-3.5 GHz | 115W | 3ms, 30% | 13dB | 55% | 46V |
| IGN3135M135 | 3.1-3.5GHz | 135W | 300µs, 10% | 13dB | 50% | 50V |
| IGN3135M230 | 3.1-3.5GHz | 230W | 300µs, 10% | 13dB | 50% | 50V |
| IGN2998S500 | 2.998GHz | 500W | 8µs, 1% | 13dB | 55% | 50V |

C Band Radar Products

| | | | | | | |
|-------------|-------------|------|-------------|--------|-----|-----|
| IGN3842M125 | 3.8-4.2GHz | 125W | 100µs, 2% | 14dB | 55% | 50V |
| IGN4450CW50 | 4.4-5.0GHz | 50W | CW | 12dB | 58% | 24V |
| IGN4450M50 | 4.4-5.0GHz | 50W | 300µs, 10% | 14dB | 50% | 36V |
| IGN4450M90 | 4.4-5.0GHz | 90W | 300µs, 10% | 12.5dB | 50% | 36V |
| IGN5259CW50 | 5.2-5.9 GHz | 50W | CW | 13.0dB | 54% | 24V |
| IGN5259M10 | 5.2-5.9GHz | 10W | 300µs, 10% | 13dB | 60% | 36V |
| IGN5259M15 | 5.2-5.9GHz | 15W | 300µs, 10% | 14.8dB | 50% | 36V |
| IGN5259M20 | 5.2-5.9GHz | 20W | 300µs, 10% | 15dB | 65% | 36V |
| IGT5259M25 | 5.2-5.9GHz | 25W | 300us, 10%, | 10dB | 50% | 36V |
| IGN5259M40 | 5.2-5.9GHz | 40W | 300µs, 10% | 12dB | 45% | 36V |
| IGN5259M80 | 5.2-5.9GHz | 80W | 300µs, 10% | 11.5dB | 42% | 36V |

Module Solutions with 50 ohm Matched Pallets

| | | | | | | |
|------------------|------------|-------|------------|--------|-----|-----|
| IGNP0110UM100 | 0.1-1GHz | 100W | CW | 12dB | 55% | 28V |
| IGNP2729M800 | 2.7-2.9GHz | 800W | 300us, 10% | 11dB | 58% | 50V |
| IGNP2731M400-GPS | 2.3-3.1GHz | 425W | 300us, 10% | 14.3dB | 56% | 44V |
| IGNP2729M1KW-GPS | 2.7-2.9GHz | 1000W | 300us, 10% | 11dB | 50% | 50V |
| IGNP4450M180 | 4.4-5.0GHz | 180W | 300us, 10% | 12.5dB | 55% | 36V |
| IGNP5259M150 | 5.2-5.9GHz | 150W | 300us, 10% | 12.9dB | 45% | 36V |

NOTE: IGN parts are pre-matched transistors and IGT parts are 50 ohm matched transistors. * denotes products in development.