

| Part number | Frequency band | Output power | Pulse width/ duty factor |
|-------------|----------------|--------------|-----------------------------|
|-------------|----------------|--------------|-----------------------------|

Avionics Products / BiPolar

| | | | |
|-------------|---------------|-------|--------------------|
| IB0912L30 | 960-1215 MHz | 30W | 5.8ms burst, 22.7% |
| IB0912L70 | 960-1215 MHz | 70W | 5.8ms burst, 22.7% |
| IB0912L200 | 960-1215 MHz | 200W | 5.8ms burst, 22.7% |
| IB0912M70 | 960-1215 MHz | 70W | 10us, 10% |
| IB0912M210 | 960-1215 MHz | 210W | 10us, 10% |
| IB0912M350 | 960-1215 MHz | 350W | 10us, 10% |
| IB0912M500 | 960-1215 MHz | 500W | 10us, 10% |
| IB0912M600 | 960-1215 MHz | 600W | 10us, 10% |
| IB1012S10 | 1025-1150 MHz | 10W | 10µs, 1% |
| IB1012S20 | 1025-1150 MHz | 20W | 10µs, 1% |
| IB1012S50 | 1025-1150 MHz | 50W | 10µs, 1% |
| IB1012S150 | 1025-1150 MHz | 150W | 10µs, 1% |
| IB1012S500 | 1025-1150 MHz | 500W | 10µs, 1% |
| IB1012S800 | 1025-1150 MHz | 800W | 10µs, 1% |
| IB1012S1100 | 1025-1150 MHz | 1100W | 10µs, 1% |
| IB1011S70 | 1030/1090 MHz | 70W | 10µs, 1% |
| IB1011S190 | 1030/1090 MHz | 190W | 10µs, 1% |
| IB1011S250 | 1030/1090 MHz | 250W | 10µs, 1% |
| IB1011S350 | 1030/1090 MHz | 350W | 10µs, 1% |
| IB1011S1000 | 1030/1090 MHz | 1000W | 10µs, 1% |
| IB1011S1500 | 1030/1090 MHz | 1425W | 10µs, 1% |
| IB1011M10 | 1030/1090 MHz | 10W | 128µs burst, 1% |
| IB1011M20 | 1030/1090 MHz | 20W | 128µs burst, 1% |
| IB1011M70 | 1030/1090 MHz | 70W | 128µs burst, 1% |
| IB1011M140 | 1030/1090 MHz | 140W | 128µs burst, 1% |
| IB1011M190 | 1030/1090 MHz | 190W | 128µs burst, 1% |
| IB1011M350 | 1030/1090 MHz | 350W | 128µs burst, 1% |
| IB1011M660 | 1030/1090 MHz | 660W | 128µs burst, 1% |
| IB1011M800 | 1030/1090 MHz | 800W | 128µs burst, 1% |
| IB1011M1000 | 1030/1090 MHz | 1000W | 128µs burst, 1% |
| IB1011M1100 | 1030-1090 MHz | 1100W | 32µs, 2% |
| IB1011L15 | 1030/1090 MHz | 15W | 2.4ms burst, 6.4% |
| IB1011L40 | 1030/1090 MHz | 40W | 2.4ms burst, 6.4% |
| IB1011L110 | 1030/1090 MHz | 110W | 2.4ms burst, 6.4% |
| IB1011L220 | 1030/1090 MHz | 220W | 2.4ms burst, 6.4% |
| IB1011L470 | 1030/1090 MHz | 470W | 2.4ms burst, 6.4% |

Avionics Products / LDMOS

IFF

| | | | |
|----------------|---------------|-------|----------|
| ILD1011M15 | 1030-1090 MHz | 15W | 50µs, 2% |
| ILD1011M30 | 1030-1090 MHz | 30W | 50µs, 2% |
| ILD1011M150 | 1030/1090 MHz | 150W | 50µs, 2% |
| ILD1011M250 | 1030/1090 MHz | 250W | 50µs, 2% |
| ILD1011M400 | 1030-1090 MHz | 400W | 50µs, 2% |
| ILD1011M15HV | 1030-1090 MHz | 15W | 50µs, 2% |
| ILD1011M275HV | 1030-1090 MHz | 275W | 50µs, 2% |
| ILD1011M550HV | 1030-1090 MHz | 550W | 50µs, 2% |
| ILD1011M800HV | 1030-1090 MHz | 800W | 50µs, 2% |
| ILD1011M160HV | 1030/1090 MHz | 160W | 50µs, 2% |
| ILD1011M280HV | 1030/1090 MHz | 280W | 50µs, 2% |
| ILD1011M1000HV | 1030/1090 MHz | 1000W | 50µs, 2% |

TACAN/DME

| | | | |
|---------------|---------------|------|-----------|
| ILD0912M60 | 960-1215 MHz | 60W | 10µs, 10% |
| ILD0912M15HV | 960-1215 MHz | 15W | 10µs, 10% |
| ILD0912M150HV | 960-1215 MHz | 150W | 10µs, 10% |
| ILD0912M400HV | 960-1215 MHz | 400W | 10µs, 10% |
| ILD1012S500HV | 1025-1150 MHz | 500W | 10µs, 1% |

S-Band Medical Products

| | | | |
|------------|----------|------|----------|
| IB2856S30 | 2856 MHz | 30W | 12µs, 3% |
| IB2856S65 | 2856 MHz | 65W | 12µs, 3% |
| IB2856S250 | 2856 MHz | 250W | 12µs, 3% |
| IB3000S60 | 3000 MHz | 60W | 12µs, 1% |
| IB3000S200 | 3000 MHz | 200W | 12µs, 1% |

| Part number | Frequency band | Output power | Pulse width/ duty factor |
|-------------|----------------|--------------|-----------------------------|
|-------------|----------------|--------------|-----------------------------|

VHF / UHF / L Band Radar Products

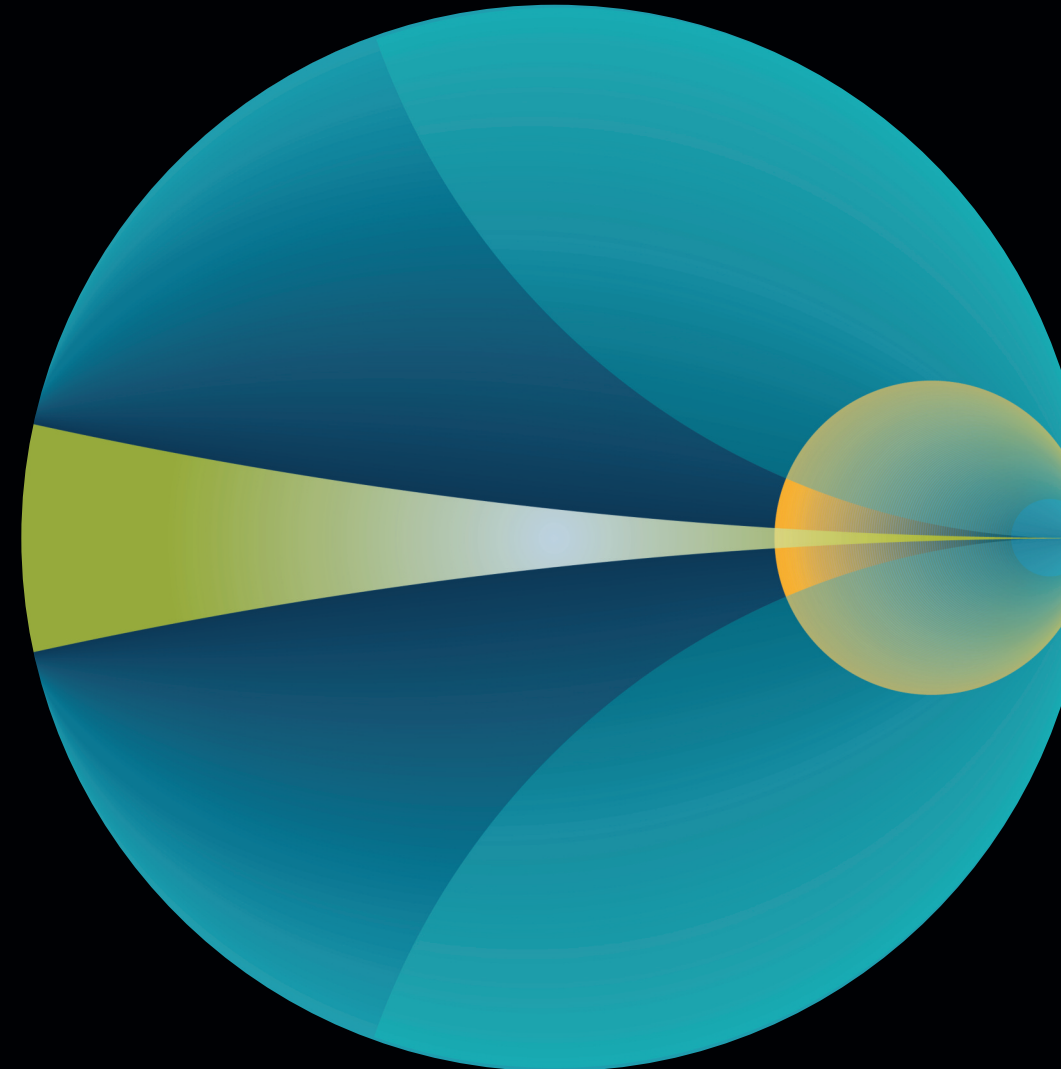
| | | | |
|------------|-------------|------|------------|
| IDM165L650 | 125-167 MHz | 650W | 1ms, 20% |
| IDM265L650 | 190-265 MHz | 650W | 1ms, 20% |
| IB450S300 | 450 MHz | 300W | 30µs, 10% |
| IB450S500 | 450 MHz | 500W | 30µs, 10% |
| IB0810M12 | 870-990 MHz | 12W | 300µs, 15% |
| IB0810M50 | 870-990 MHz | 50W | 300µs, 15% |
| IB0810M100 | 870-990 MHz | 100W | 300µs, 15% |
| IB0810M210 | 870-990 MHz | 210W | 300µs, 15% |
| IB1214M6 | 1.2-1.4 GHz | 6W | 100µs, 10% |
| IB1214M32 | 1.2-1.4 GHz | 32W | 100µs, 10% |
| IB1214M55 | 1.2-1.4 GHz | 55W | 100µs, 10% |
| IB1214M150 | 1.2-1.4 GHz | 150W | 100µs, 10% |
| IB1214M300 | 1.2-1.4 GHz | 300W | 100µs, 10% |
| IB1214M130 | 1.2-1.4 GHz | 130W | 300µs, 10% |
| IB1214M375 | 1.2-1.4 GHz | 375W | 300µs, 10% |

L-Band Radar Products / LDMOS

| | | | |
|--------------|-------------|------|------------|
| ILD1214EL40 | 1.2-1.4 GHz | 40W | 16ms, 50% |
| ILD1214EL200 | 1.2-1.4 GHz | 200W | 16ms, 50% |
| ILD1214M60 | 1.2-1.4 GHz | 60W | 300µs, 10% |
| ILD1214L120 | 1.2-1.4 GHz | 120W | 2.2ms, 20% |
| ILD1214L250 | 1.2-1.4 GHz | 250W | 1ms, 10% |

S-Band Radar Products

| | | | |
|-------------|-------------|------|------------|
| IB2226M80 | 2.2-2.6 GHz | 80W | 200µs, 10% |
| IB2226M160 | 2.2-2.6 GHz | 160W | 200µs, 10% |
| IB2226MH15 | 2.2-2.6 GHz | 15W | 200µs, 10% |
| IB2226MH110 | 2.2-2.6 GHz | 110W | 200µs, 10% |
| IB2729M5 | 2.7-2.9 GHz | 5W | 100µs, 10% |
| IB2729M25 | 2.7-2.9 GHz | 25W | 100µs, 10% |
| IB2729M90 | 2.7-2.9 GHz | 90W | 100µs, 10% |
| IB2729M170 | 2.7-2.9 GHz | 170W | 100µs, 10% |
| IB2729MH200 | 2.7-2.9 GHz | 200W | 100µs, 10% |
| IB2731M110 | 2.7-3.1 GHz | 110W | 200µs, 10% |
| IB2731MH25 | 2.7-3.1 GHz | 25W | 200µs, 10% |
| IB2731MH110 | 2.7-3.1 GHz | 110W | 200µs, 10% |
| IB2931MH55 | 2.9-3.1 GHz | 55W | 100µs, 10% |
| IB2931MH155 | 2.9-3.1 GHz | 155W | 100µs, 10% |
| IB2934M100 | 2.9-3.4 GHz | 100W | 100µs, 10% |
| IB3134M15 | 3.1-3.4 GHz | 15W | 300µs, 10% |
| IB3134M25 | 3.1-3.4 GHz | 25W | 300µs, 10% |
| IB3134M70 | 3.1-3.4 GHz | 70W | 300µs, 10% |
| IB3134M100 | 3.1-3.4 GHz | 100W | 300µs, 10% |
| IB3135MH5 | 3.1-3.5 GHz | 5W | 100µs, 10% |
| IB3135MH20 | 3.1-3.5 GHz | 20W | 100µs, 10% |
| IB3135MH45 | 3.1-3.5 GHz | 45W | 100µs, 10% |
| IB3135MH65 | 3.1-3.5 GHz | 65W | 100µs, 10% |
| IB3135MH75 | 3.1-3.5 GHz | 75W | 100µs, 10% |
| IB3135MH100 | 3.1-3.5 GHz | 100W | 100µs, 10% |
| ILD2731M30 | 2.7-3.1 GHz | 30W | 300µs, 10% |
| ILD2731M140 | 2.7-3.1 GHz | 140W | 300µs, 10% |
| ILD2933M130 | 2.9-3.3 GHz | 130W | 300µs, 10% |
| ILD3135EL20 | 3.1-3.5 GHz | 20W | 16ms, 20% |
| ILD3135M30 | 3.1-3.5 GHz | 30W | 300µs, 10% |
| ILD3135M120 | 3.1-3.5 GHz | 120W | 300µs, 10% |
| ILD3135M180 | 3.1-3.5 GHz | 180W | 300µs, 10% |
| ILD2735M120 | 2.7-3.5 GHz | 120W | 300µs, 10% |

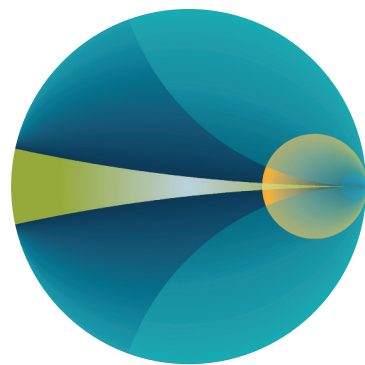


Integra

Technologies

High Power Radio
Frequency Devices, Pallets
and Amplifiers

www.integratech.com



Integra

Technologies

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 Technologies was founded in February 1997 with the goal of redefining the state of the art in S-Band pulsed bipolar power transistors. Within a few short years this goal was realized and resulted in the granting of two US patents in late 2001.

Integra's core group of engineers and scientists has worked in the high power RF semiconductor industry for many years including having been founding members of successful startups.

Integra is an ISO 9001:2008 certified manufacturer of state of the art Radio Frequency (RF) power transistors, pallets and RF high power amplifiers (HPA). The facility produces 150mm (6") wafers in its 300 square meter Class-100 clean room. In addition, device assembly and 100% functional testing is performed onsite using fully automated equipment.

At its inception, Integra operated using a fabless model, producing die in both Silicon Valley and Asia. After several years it became apparent that the wafer fabrication process would need to be performed onsite to ensure consistent, high quality devices.

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.

At this point Integra built the largest all gold metal wafer fab in the industry. Integra has the capacity to fabricate 250 150mm wafers/month.

Integra has continued to expand in size and capability and has recently added a design center in El Dorado Hills, California. This group is working on advanced R&D with the goal of once more making a revolutionary increase in device performance.

Integra's patent protected technology consists of BIPOLAR, LDMOS and VDMOS RF power transistors, 50 Ohm matched RF amplifier pallets and modules, as well as multi stage High Power Amplifiers (HPA) intended for Radar, Avionics, Military Communication and other defense applications.

Integra is fully committed to a policy of total customer satisfaction through compliance to our customers' requirements, on-time delivery, and continual improvement of our quality systems.

Products and Specifications

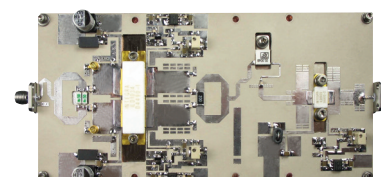
MPA products



MPAL2731M30
30W LDMOS 2.7-3.1GHz

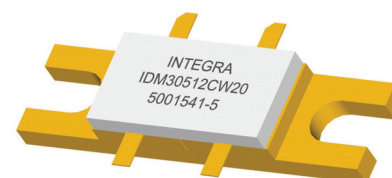


MPAL2731M130
130W LDMOS 2.7-3.1GHz



ILP1214EL200
1.2-1.4GHz 200W 16ms, 50%

Broadband Communication Products



IDM30512CW20
30-512 MHz 20W CW

MPA stands for Miniaturized Power Amplifier. Integra's MPA devices are completely impedance matched to 50 ohms. This makes them very easy to use. As with any typical LDMOS device, they can operate under nearly any pulse width and duty factor combination and also under biasing conditions ranging from class B through class A.

| Part number | Frequency band | Output power | Pulse width/duty factor |
|-------------|----------------|--------------|-------------------------|
|-------------|----------------|--------------|-------------------------|

S-Band Radar LDMOS

| | | | |
|--------------|-------------|------|------------|
| MPAL2731M15 | 2.7-3.1 GHz | 15W | 300µs, 10% |
| MPAL2731M30 | 2.7-3.1 GHz | 30W | 300µs, 10% |
| MPAL2731M130 | 2.7-3.1 GHz | 130W | 100µs, 10% |
| MPAL3035M15 | 3.0-3.5 GHz | 15W | 300µs, 10% |
| MPAL3035M30 | 3.0-3.5 GHz | 30W | 300µs, 10% |

Pallet Products

| | | | |
|---------------|---------------|-------|-------------------|
| IBP1011L900 | 1030 MHz | 900W | 2.4ms burst, 6.4% |
| IBPM1090S600 | 1090 MHz | 600W | 10µs, 1% |
| IBPM1030S1K | 1030 MHz | 1000W | 10µs, 1% |
| IBLP1012S1800 | 1025-1150 MHz | 1800W | 10µs, 1% |
| ILP1214EL200 | 1.2-1.4 GHz | 200W | 16ms, 50% |
| IBP1214M700 | 1.2-1.4 GHz | 700W | 200µs, 10% |
| IBP2226M300 | 2.2-2.6 GHz | 300W | 200µs, 10% |
| IBP2729M300 | 2.7-2.9 GHz | 300W | 100µs, 10% |
| IBP2731M200 | 2.7-3.1 GHz | 200W | 200µs, 10% |
| IBP2934M190 | 2.9-3.4 GHz | 190W | 100µs, 10% |
| IBLP2729M90 | 2.7-2.9 GHz | 90W | 100µs, 10% |
| IBP2729MH300 | 2.7-2.9 GHz | 300W | 100µs, 10% |
| IBP3134M25 | 3.1-3.4 GHz | 25W | 300µs, 10% |
| IBP3134M220 | 3.1-3.4 GHz | 220W | 200µs, 10% |
| IBP3135M150 | 3.1-3.5 GHz | 150W | 100µs, 10% |
| IBP3135MH200 | 3.1-3.5 GHz | 200W | 100µs, 10% |

CW Portfolio

| | | | |
|---------------|---------------|------|----|
| IDM175CW300 | 1-200 MHz | 300W | CW |
| IDM500CW80 | 1-500 MHz | 80W | CW |
| IDM500CW120 | 1-500 MHz | 120W | CW |
| IDM500CW150 | 1-500 MHz | 150W | CW |
| IDM500CW200 | 1-500 MHz | 200W | CW |
| IDM500CW300 | 1-500 MHz | 300W | CW |
| IDM30512CW20 | 30-512 MHz | 20W | CW |
| IDM30512CW50 | 30-512 MHz | 50W | CW |
| IDM30512CW100 | 30-512 MHz | 100W | CW |
| ILD1214CW60 | 1200-1400 MHz | 60W | CW |
| ILD0814CW60 | 850-1450 MHz | 60W | CW |
| ILD1414CW300 | 1400 MHz | 300W | CW |
| ILD2325CW90 | 2.3-2.5 GHz | 90W | CW |