



# PRODUCT CATALOG

## FALL 2022

**GALLIUM SEMICONDUCTOR** is a leading supplier of Gallium Nitride based semiconductor solutions for 5G mobile communications, aerospace and defense, and industrial, scientific, and medical (ISM) applications.

With our high performance GaN transistors, engineers can design linear amplifiers that offer more linear power than other semiconductor technologies for the same size, weight, and power consumption. Our GaN transistors are uniquely designed to have a high breakdown voltage for ruggedness and lower output capacitance for improved broadband.

GaN has a wide bandgap which translates to a high operating temperature, a high average and peak power, and longer lifetime. It also has a high saturation velocity and low parasitics which enable high operating frequency and highly efficient amplifier topology.

## GaN Bare Die

Our bare die GaN-on-SiC HEMTs are designed for optimal thermal behaviour and ideal for designing hybrids and modules. These offer maximum flexibility for customization of RF Power Amplifier performance.

Part Name	Frequency (GHz)	Pout (W)	Linear Gain (dB)	Efficiency (%)	Voltage (V)	Package
GD010	DC-8	15	19.8	61	50	Die
GD020	DC-7	30	21.2	63	50	Die
GD030	DC-6	50	21.2	64	50	Die
GD060	DC-3.7	80	21.3	64	50	Die
GD080	DC-3.7	90	21.4	66	50	Die
GD090	DC-3.7	110	21.6	67	50	Die
GD135	DC-3.2	150	18.8	66	50	Die
GD160	DC-3.2	160	18.5	65	50	Die
GD200	DC-3.2	200	18.4	64	50	Die
GD250	DC-2.9	250	18.6	66	50	Die
GD300	DC-2.9	300	18.0	65	50	Die
GD400	DC-2.9	400	17.8	64	50	Die

## Package Overview



**DFN14 6x3**



**NI-200**



**NI-360**



**ACP-462**



**ACP-800**

All products, product specifications, and data are subject to change without notice.

[www.galliumsemi.com](http://www.galliumsemi.com)

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# Discrete Unmatched GaN Transistors

We offer a line of packaged GaN-on-SiC HEMTs with no internal matching. These are packaged versions of our high performance discrete HEMT die with high reliability and excellent heat dissipation. Transistors are available in plastic overmold and air cavity ceramic packages with RoHS compliance.

Part Name	Frequency (GHz)	Pout (W)	Linear Gain (dB)	Efficiency (%)	Voltage (V)	Package
GT010D	DC-8	15	19.8	61	50	DFN14 6x3
GT020D	DC-7	30	21.2	63	50	DFN14 6x3
GT030D	DC-6	50	21.2	64	50	DFN14 6x3
GT065D	DC-3.7	80	21.3	64	50	DFN14 6x3
GT090D	DC-3.7	110	21.6	67	50	DFN14 6x3
GT135D	DC-3.2	150	18.8	66	50	DFN14 6x3
GTH0-008015S	DC-8	15	20.0	62	50	NI-200
GTH0-007030S	DC-7	30	21.1	66	50	NI-200
GTH0-006050S	DC-6	50	21.2	64	50	NI-360
GTH0-0037110S	DC-3.7	110	21.4	66	50	NI-360
GTH0-0029220S	DC-2.9	220	20.7	67	50	NI-360
GTH0-0037080S	DC-3.7	90	21.5	66	50	NI-360
GTH0-0029200P	DC-2.9	110	21.4	66	50	NI-360

# Discrete Prematched GaN Transistors

We also offer a line of pre-matched GaN-on-SiC HEMTs with input internal matching for easy module and system designs. Transistors are available in air cavity plastic package with RoHS compliance.

Part Name	Frequency (GHz)	Pout (W)	Linear Gain (dB)	Efficiency (%)	Voltage (V)	Package
GTH0-3338125S	3.3-3.8	125	19.1	71	50	ACP-462
GTH0-3338250S	3.3-3.8	250	18.5	70	50	ACP-462
GTH0-3338500S	3.3-3.8	500	18.2	69	50	ACP-800
GTH0-2731125S	2.7-3.1	125	19.2	72	50	ACP-462
GTH0-2731250S	2.7-3.1	250	19.5	71	50	ACP-462
GTH0-2731500S	2.7-3.1	500	18.6	70	50	ACP-800
GTH0-1524125S	1.5-2.4	125	19.7	72	50	ACP-462
GTH0-1524250S	1.5-2.4	250	19.6	73	50	ACP-462
GTH0-1524500S	1.5-2.4	500	18.8	68	50	ACP-800

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We are proud to announce our new partnerships with manufacturers of leading edge and disruptive technologies. These technologies drive the latest innovations for our customers.