



English



BGA6130

400 MHz to 2700 MHz 1 W high efficiency silicon amplifier

The BGA6130 MMIC is a one-stage amplifier, offered in a low-cost leadless surface-mount package. At 3.6 V it delivers 29.5 dBm output power at 3 dB gain compression with efficiency higher than 55 %. Its power saving features include simple quiescent current adjustment, which allows class-AB operation and logic-level shutdown control to reduce the supply current to 4 μ A.

Features and benefits

- 400 MHz to 2700 MHz frequency operating range
- Integrated active biasing
- External matching allows broad application optimization
- Efficiencies higher than 55 %
- 3.6 V single supply operation
- Power-down
- Excellent robustness

Applications

- Broadband CPE / MoCA
- WLAN / ISM / RFID
- Wireless Sensor Networks
- Industrial applications
- Satellite Master Antenna TV (SMATV)

- [Parametric search](#) all Medium power amplifiers

All information on this product information page is subject to the subsequent disclaimers:

- [General product disclaimer](#)
- [Quality and reliability disclaimer](#)

Parametrics of this product

Symbol	Parameter	Conditions	Min	Typ/Nom	Max	Unit
Static characteristics						
I_{SUP}	supply current	$V_{SUP} = 8 \text{ V}$	50	70	90	mA
V_{SUP}	supply voltage		3.3	3.6	3.9	V
f_{range}	frequency range		400		2700	MHz
RF Characteristics						
G_p	power gain	$f = 434 \text{ MHz}; V_{SUP} = 3.6 \text{ V}$	14	17	20	dB
G_p	power gain	$f = 915 \text{ MHz}; V_{SUP} = 3.6 \text{ V}$	11	14	17	dB
$P_{L(1dB)}$	output power at 1 dB gain compression	$f = 434 \text{ MHz}; I_{SUP} = 70 \text{ mA}; V_{SUP} = 3.6 \text{ V}$	25	28		dBm
$P_{L(1dB)}$	output power at 1 dB gain compression	$f = 915 \text{ MHz}; I_{SUP} = 70 \text{ mA}; V_{SUP} = 3.6 \text{ V}$	26	29		dBm
NF	noise figure	$f = 434 \text{ MHz}$		4.5		dB
NF	noise figure	$f = 915 \text{ MHz}$		4		dB
η	efficiency	$f = 434 \text{ MHz}$		56		%
η	efficiency	$f = 915 \text{ MHz}$		60		%

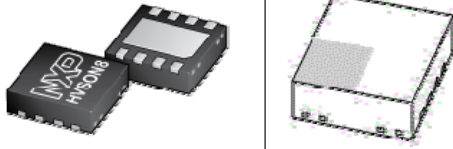
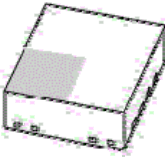
Similar products

- [Parametric search](#) all Medium power amplifiers
- [Parametrics](#) series

Products / Packages

Type number	Orderable part number	Ordering code (12NC)	Product status	Package	Packing	Marking
BGA6130	BGA6130,118	9352 948 92118	Development	SOT908-3 (HVSON8)	Reel Pack, SMD, 13"	Standard Marking

Pinning information

Pin	Symbol	Description	Simplified outline	Graphic symbol
1	n.c.	not connected		
2	RF_OUT	radio frequency output		
3	RF_OUT	radio frequency output		
4	n.c.	not connected		
5	V _{CC}	bias supply voltage		
6	ENABLE	enable		
7	RF_IN	radio frequency input		
8	ICQ_ADJ	quiescent collector current adjustment by an external resistor		
	GND	exposed die pad		

Quality, reliability & chemical content

Type number	Orderable part number	Chemical content	RoHS	Leadfree conversion date	RHF	IFR (FIT)	MTBF (hours)	MSL	MSL LF
BGA6130	BGA6130,118	BGA6130	 	Always Pb-free				1	1

[Quality and reliability disclaimer](#)

Documentation for this product

Type	Format	Title	Date
Selection guide	pdf NXP's RF Manual 15th edition (v.1.0)	2011-05-19

Ordering & availability

Type number	Ordering code(12NC)	Orderable part number	Region	Distributor	In stock	Order quantity	Inventory date	Buy online	Samples
BGA6130	9352 948 92118	BGA6130,118							not available

Sample

Sample orders normally take 2-4 days for delivery.

If you do not have a direct account with NXP our network of global and regional distributors is available and equipped to support you with NXP samples. As a NXP customer you also have the option to order samples via our sales organisation.

Demo boards



OM7828
BGA6130 medium power amplifier evaluation kit

Technical support

Do you want to ask technical questions to an NXP expert?

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