

## 50Ω Gain Block MMIC Amplifier 4 - 10 GHz

Case PN: 6UDD2W6S1A2

## Features:

- \* Frequency Range: 4G to 10 GHz;
- \* High Output IP3: +25 dBm
- \* Low Noise Figure: typical 3.5 dB
- \* 15dB Gain, +13dBm P1dB
- \* Single DC Voltage: +5V
- \* Operating Current: 50 mA
- \* Stainless Steel SMA Female Connector
- \* High Quality Rogers RO4350 PCB  
(very low loss and high thermal performance)
- \* ROHS Compliant

## Applications:

- \* Cellular/PCS
- \* Mobile Infrastructure
- \* CATV, Cable Modem & DBS
- \* General Purpose Wireless
- \* SDR & Ham Radio

## Product Overview:

GBA4G10G is a HBT Gain Block MMIC Amplifier covering 4 GHz to 10 GHz in a small 15/16"x15/16"x0.59" shielded RF enclosure (PN: 6UDD2W6S1A2). This amplifier can be used as a cascable IF or RF gain stage in 50 Ohm applications. It delivers 14.5 dB gain, and +13dBm output P1dB with only 3.5 dB noise figure. The Gain Block can be biased from a single supply +5V.



## Electrical Specifications:

Item	Parameter	Min	Typ	Max	Min	Typ	Max	Units
1	Operational Frequency Range		4 - 5			5 - 10		GHz
2	Gain (S21)	12.5	14.5		13	15		dB
3	Gain Variation Over Temp.		0.009			0.012		dB/°C
3	Input Return Loss		14			12		dB
4	Output Return Loss		12			13		dB
5	Noise Figure		4.5	6		3.5	6	dB
6	Output P1dB	8	+11		10.5	+13		dBm
7	Output IP3		+23			+25		dBm
8	Current, I <sub>DD</sub>		50			50		mA

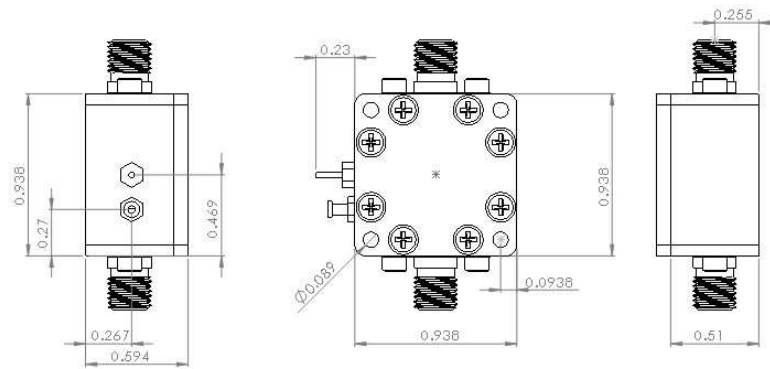
Test Conditions: V<sub>DD</sub>=+5V, I<sub>dd</sub> = 60 mA (typ.) Temp = +25 °C, 50Ω system.

## Absolute Maximum Ratings

Item	Parameter	Rating	UNITS
1	Max Device Voltage	+6	V
2	Max RF input Power	+12	dBm
3	Operating Temperature	-40 to +85	°C
4	Max Storage Temperature	-65 to +150	°C



Outline Drawing (inch)



S-Parameters

