

Product Description

Stanford Microdevices' SXA Series are high performance GaAs Heterojunction Bipolar Transistor (HBT) MMICs housed in thermally-efficient plastic packages. These GaAs HBT MMICs are fabricated using molecular beam epitaxial growth technology for consistent and repeatable performance from wafer to wafer and lot to lot.

These amplifiers utilize Darlington pair topology for broadband performance from DC-2.5 GHz. Heterojunction technology minimizes emitter non-linearities resulting in high TOIP to P1dB spreads, ideal for high-linearity applications.

Also available in die form, these devices are fully passivated for ruggedness and durability. Both bond pad and backside metal are Au-metallized for compatibility with automatic and manual die attach and bonding equipment.

SXA Series

DC-2.5 GHz MMIC Amplifier

Scheduled for Mar-98 Release

Product Features

- **High Reliability 2.0 micron HBT Technology**
- **High P1dB : +21dBm to +27dBm**
- **High 3rd Order Intercept : +39dBm to +43dBm**
- **Surface-Mountable Plastic Package**
- **Broadband Performance**

Applications

- **High Linearity Applications**
- **Wireless LAN, WAN**

Electrical Specifications at Ta = 25C

Symbol	Parameters: Test Conditions: Z _o = 50 Ohms		Units	Min.	Typ.	Max.
P _{1dB}	Output Power at 1dB Compression	SXA-1	dBm	20	21	
		SXA-2		23	24	
		SXA-3		26	27	
S ₂₁	Power Gain	SXA-1	dB		15	
		SXA-2			18	
		SXA-3			13	
VSWR	Input VSWR	DC-2.5 GHz	-		2.0:1	
VSWR	Output VSWR	DC-2.5 GHz	-		3.0:1	
IP ₃	Third Order Intercept Point	SXA-1	dBm		39	
		SXA-2			41	
		SXA-3			43	
I _d	Device Current	SXA-1 Vd=5.0V	mA		90	
		SXA-2 Vd=5.0V			210	
		SXA-3 Vd=5.0V			350	

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