

Product Description

Stanford Microdevices' SMW Series are high performance GaAs High Electron Mobility Transistor (HEMT) MMICs housed in thermally-efficient ceramic packages. These HEMT MMICs are fabricated using molecular beam epitaxial growth technology and electron beam lithography for consistent and repeatable performance from wafer to wafer and lot to lot.

These amplifiers operate at +4V and -0.2V and are designed for use in commercial digital radios and wireless LANs at 24 GHz as well as LMDS (27-31 GHz) applications.

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

SMW Series

24-31 GHz MMIC Amplifier

Product Features

- High Reliability 0.1 micron HEMT Technology
- Linear Gain : 16dB Typical
- High 3rd Order Intercept
- Patented GaAs HBT Technology
- Unconditionally Stable
- Balanced Design for Excellent VSWR

Applications

- Commercial Digital Radios
- Wireless LAN
- LMDS Subscriber Equipment

Electrical Specifications at Ta = 25C

Symbol	Parameters- Test Conditions: Z ₀ = 50 Ohms		Units	Min.	Typ.	Max.
P _{1dB}	Output Power at 1dB Compression	SMW-1	dBm	20	22	
		SMW-2		23	25	
		SMW-3		26	28	
		SMW-4		29	31	
S ₂₁	Power Gain	SMW-1	dB		16	
		SMW-2			15	
		SMW-3			15	
		SMW-4			15	
VSWR	Input and Output VSWR	f = 24-31 GHz	-		1.25	
IP ₃	Third Order Intercept Point	SMW-1	dBm		32	
		SMW-2			35	
		SMW-3			38	
		SMW-4			41	
I _d	Device Current	SMW-1 Vd=4.0V	mA		400	
		SMW-2 Vd=4.0V			325	
		SMW-3 Vd=4.0V			650	
		SMW-4 Vd=4.0V			1350	

The information provided herein is believed to be reliable at press time. Stanford Microdevices assumes no responsibility for inaccuracies or omissions. Stanford Microdevices assumes no responsibility for the use of this information, and all such information shall be entirely at the user's own risk. Prices and specifications are subject to change without notice. No patent rights or licenses to any of the circuits described herein are implied or granted to any third party. Stanford Microdevices does not authorize or warrant any Stanford Microdevices product for use in life-support devices and/or systems. Copyright 1997 Stanford Microdevices, Inc. All worldwide rights reserved.