



The ZHM-26G1 is a two stage MMIC power amplifier designed for broadband high power wideband frequency applications. It works from 2 GHz- 6 GHz. It can be used as either a driver or an output stage amplifier. This device is fully matched input and output to 50 Ω which eliminates any sensitive external RF tuning components. The ZHM-26G1 is fabricated using a high reliability pHEMT process, to realize good power added efficiency and gain. The pHEMT process features full passivation for high performance and reliability.

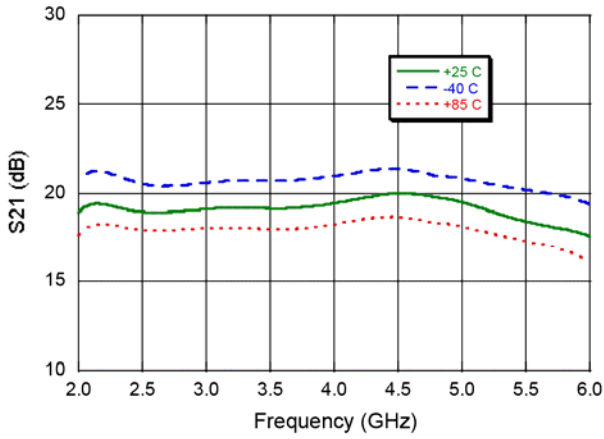
Electrical Specifications:

Freq. = 2 - 6 GHz, VDD= 12 V, IDQ= 3.5 A, TA= +25 $^{\circ}$ C, Z0= 50 Ω

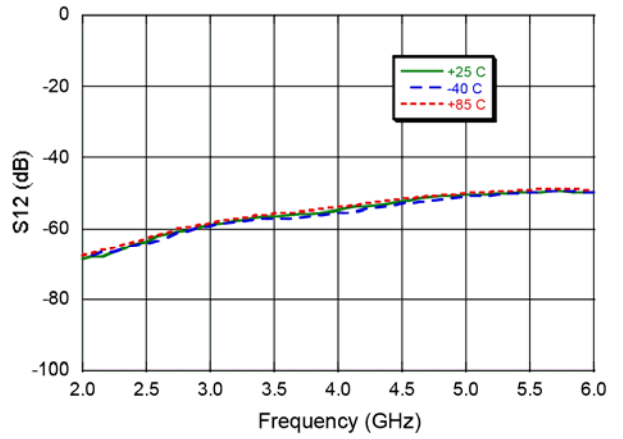
Parameter	Test Conditions	Units	Min.	Typ.	Max.
Gain	—	dB	14	18	20
Input Return Loss	—	dB	—	8	—
Output Return Loss	—	dB	—	10	—
P1dB	—	dBm	—	38	—
P _{SAT}	—	dBm	—	40	—
PAE	P _{SAT}	%	—	30	—
Duty Cycle	—	%	—	—	100
Current	I _{DQ} P _{SAT}	A	—	3.5 5.5	—

Typical Performance Curves

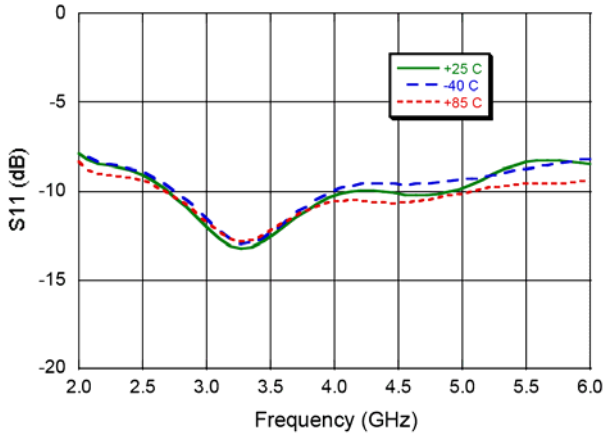
Gain



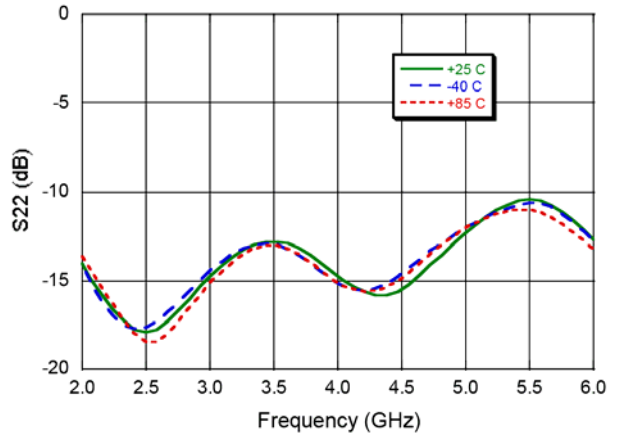
Reverse Isolation



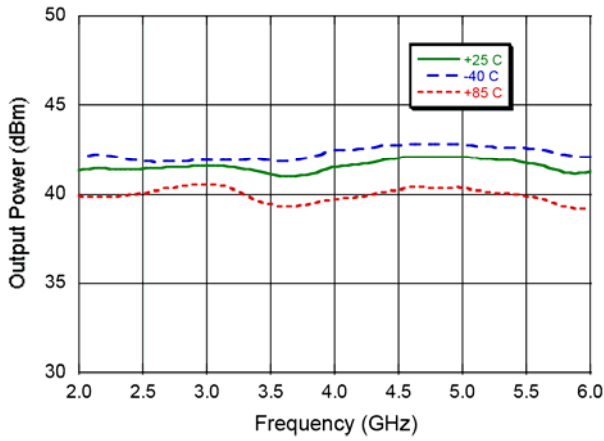
Input Return Loss



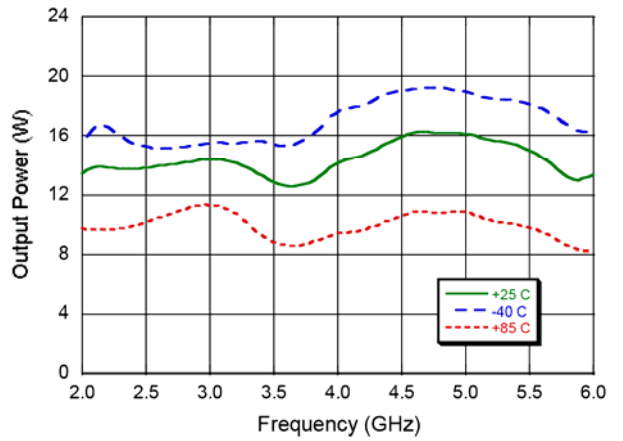
Output Return Loss



Output Power (dBm)

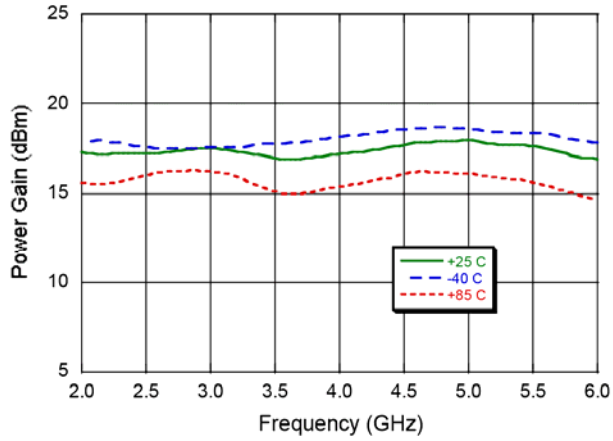


Output Power (W)

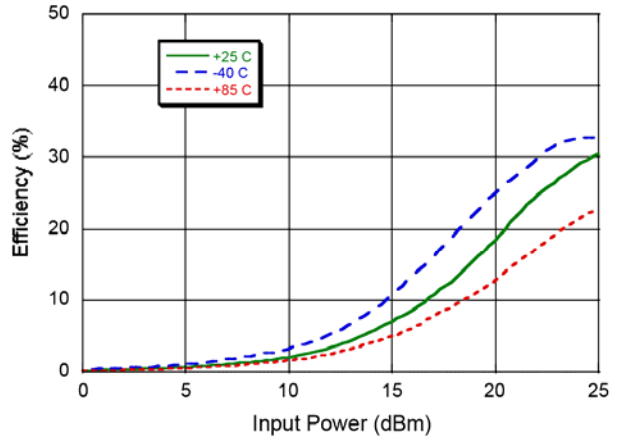


Typical Performance Curves

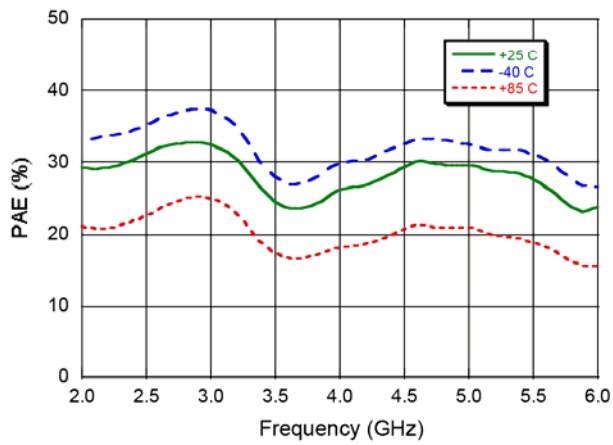
Power Gain



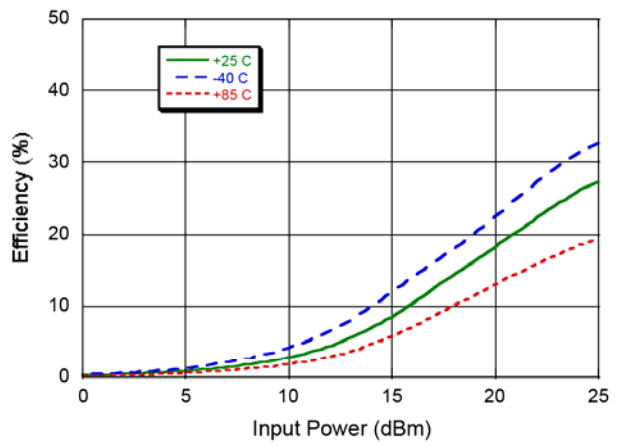
Efficiency @ 2 GHz



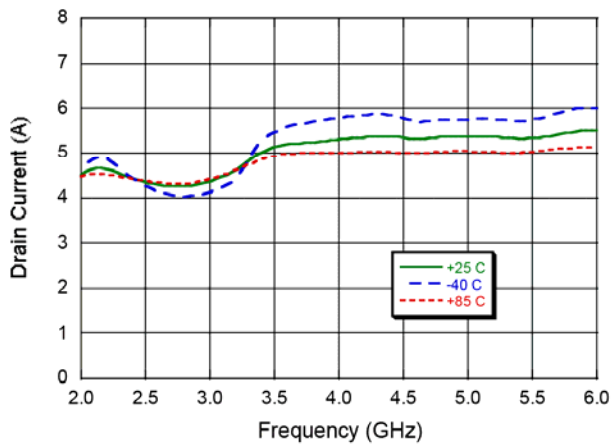
Power Added Efficiency



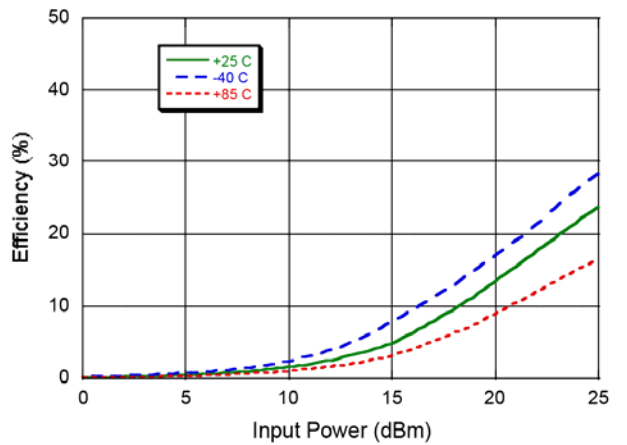
Efficiency @ 4 GHz



Drain Current

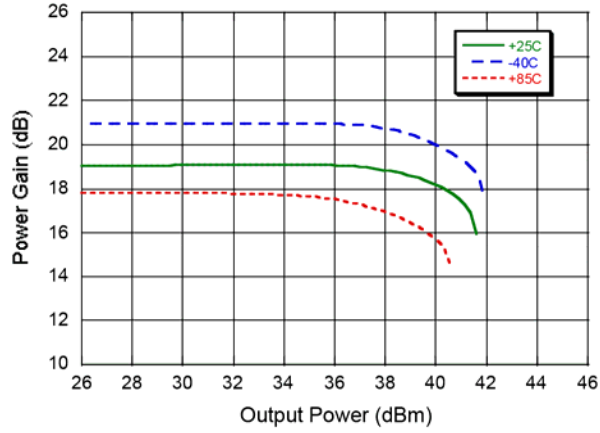


Efficiency @ 6 GHz

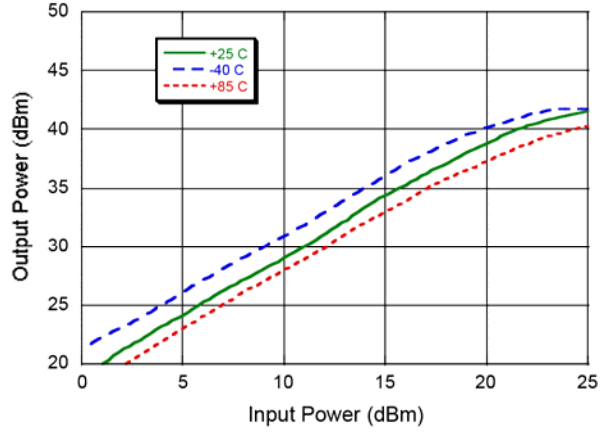


Typical Performance Curves

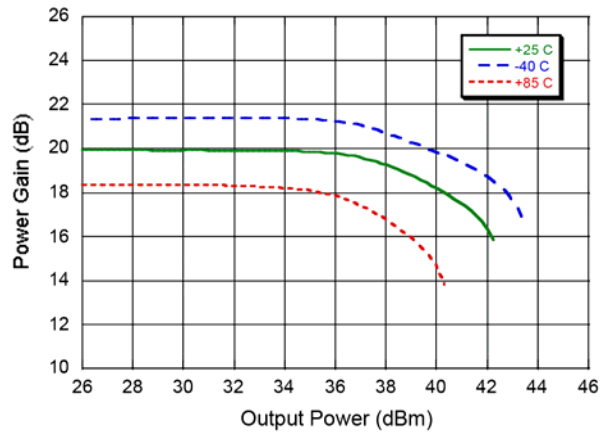
Power Gain @ 2 GHz



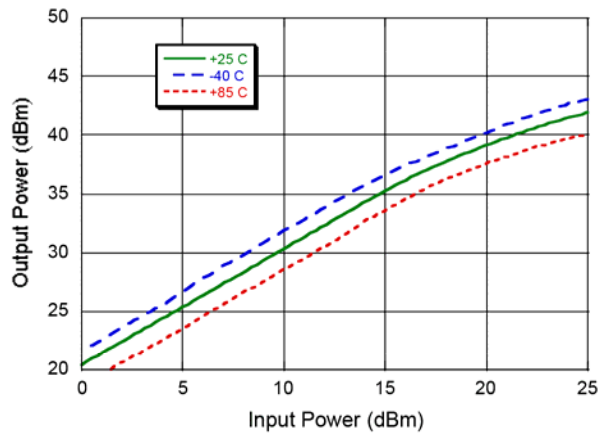
Output Power Sweep @ 2 GHz



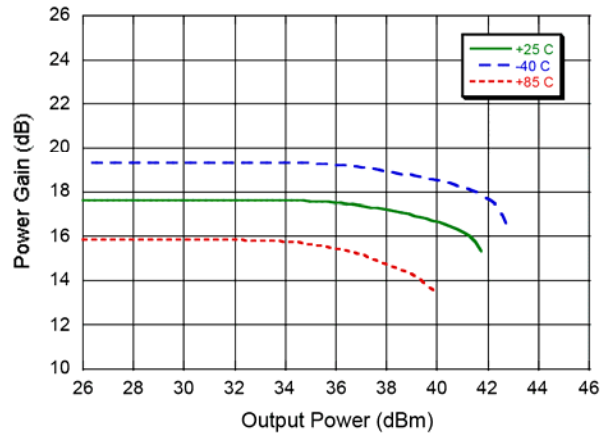
Power Gain @ 4 GHz



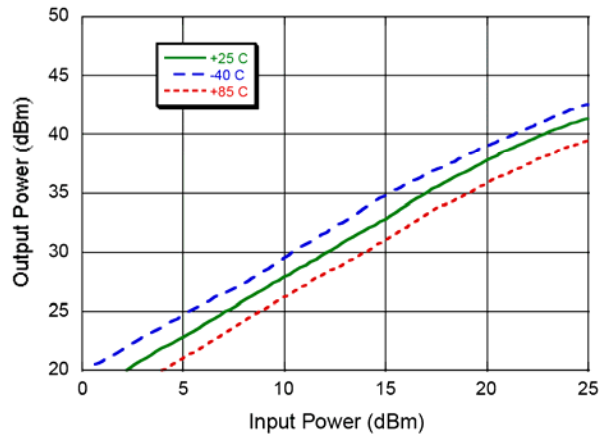
Output Power Sweep @ 4 GHz



Power Gain @ 6 GHz

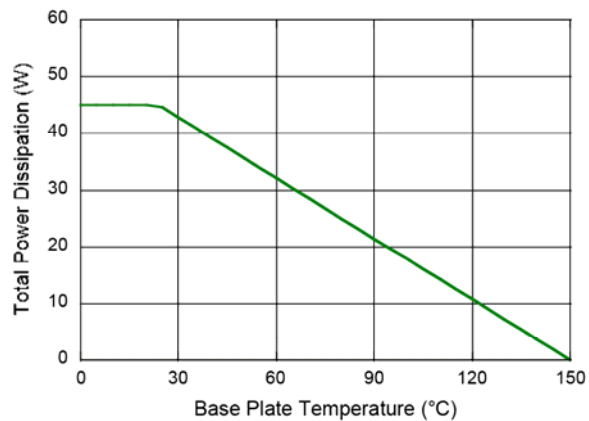


Output Power Sweep @ 6 GHz

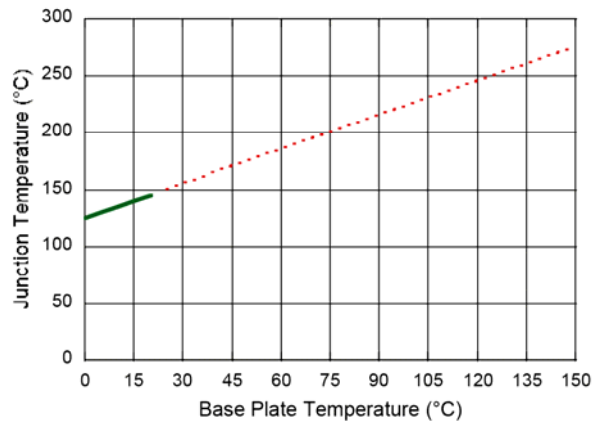


Typical Performance Curves

Max. Power Dissipation vs. Base Plate Temperature⁸



Junction Temperature vs. Base Plate Temperature with 45 W Power Dissipation



8. Power dissipation should not exceed the maximum plot shown above to maintain $T_J < 150^\circ\text{C}$. It is recommended to monitor power dissipation and decrease power dissipation in the device as required.