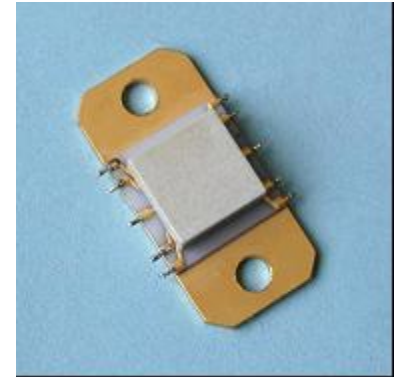




## DESCRIPTION

AMCOM's AM13714530WM-SM-R is part of the GaAs MMIC power amplifier series and operates across the 13.75 to 14.5GHz band. It has over 30dB gain and 30dBm output power. The amplifier is packaged in a drop-in ceramic package with RF and DC connections. The device's mounting flange helps to facilitate a good thermal path to a grounded heatsink. This MMIC is RoHS compliant.



## FEATURES

- Wide bandwidth from 13.75 to 14.5GHz
- High output power,  $P_{1dB} = 30\text{dBm}$  (typical)
- High gain, 30dB (typical)
- Fully matched: 50-ohm input/output impedance

## APPLICATIONS

- VSAT
- Military

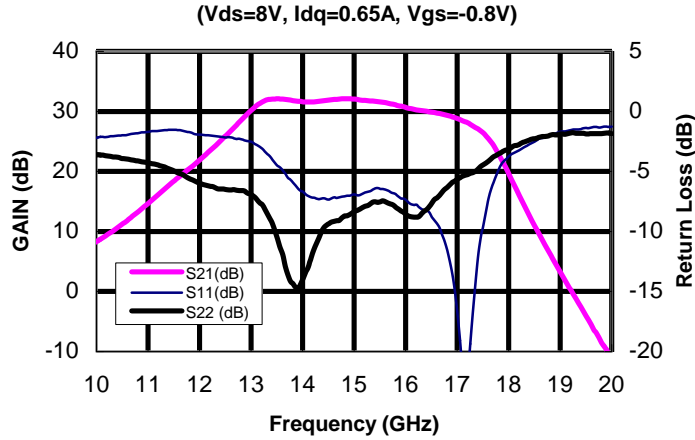
## PERFORMANCE ( $V_{ds} = 8\text{V}$ , $I_{dq} = 650\text{mA}$ , $T_a = 25^\circ\text{C}$ )

Parameters	Minimum	Typical	Maximum
Frequency	13.75 – 14.5GHz	13.75 – 14.5GHz	
$P_{1dB}$	28 dBm	30.0dBm	
IP3		40dBm	
Gain (Small signal)	27dB	30dB	
Gain variation over frequency		$\pm 0.5\text{dB}$	$\pm 1.0\text{dB}$
Noise Figure		7dB	9dB
Efficiency at $P_{in} = 1\text{dBm}$		15%	
Input/Output VSWR		3:1 / 2.5:1	
Gate voltage	-0.5V	-0.8V	-1.0V
Drain Current at $P_{out} = 30\text{dBm}$		700mA	
Thermal Resistance		9.2°C/W	

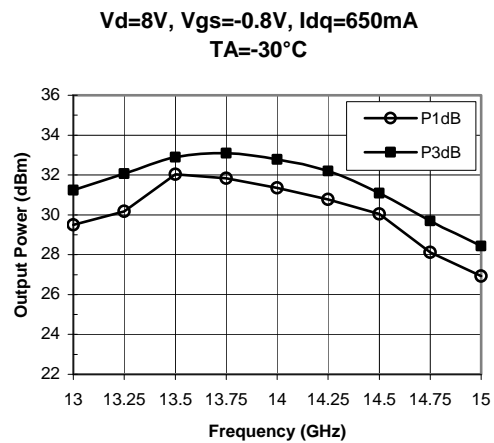
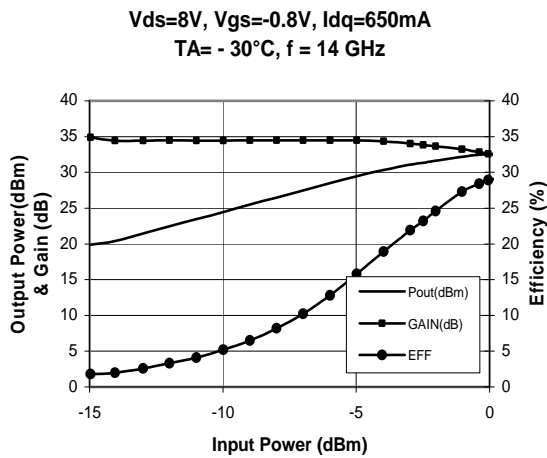
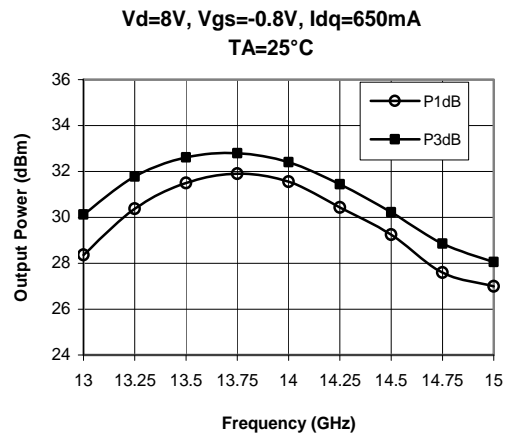
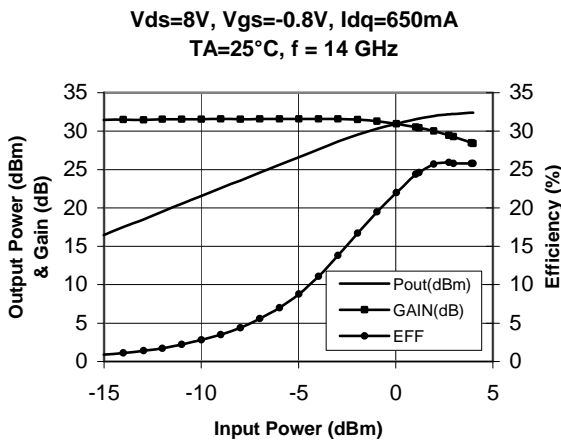
## ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Rating
Drain to Source voltage	$V_{ds}$	10V
Gate to Source voltage	$V_{gs}$	-5V
Drain current	$I_{ds}$	1.63A
Continuous dissipation (25°C)	$P_t$	16.3W
Junction temperature	$T_{ch}$	175°C
Storage temperature	$T_{sto}$	-55°C to +135°C

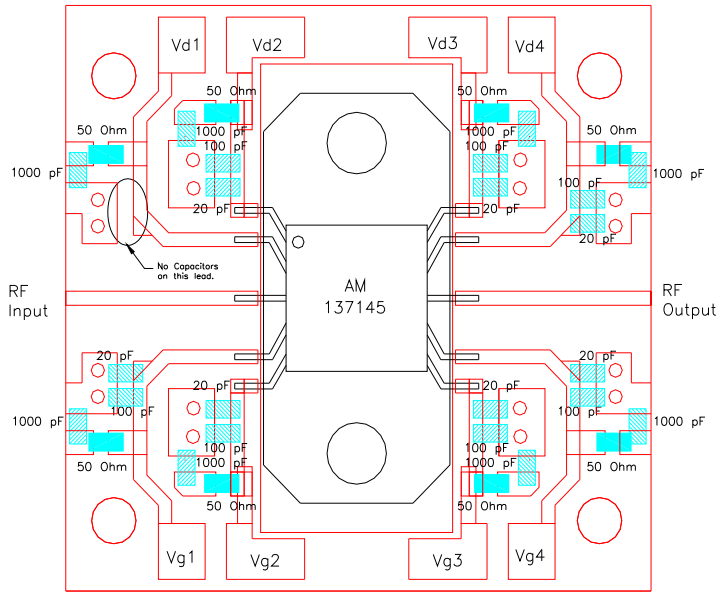
**SMALL SIGNAL DATA**





**POWER DATA**



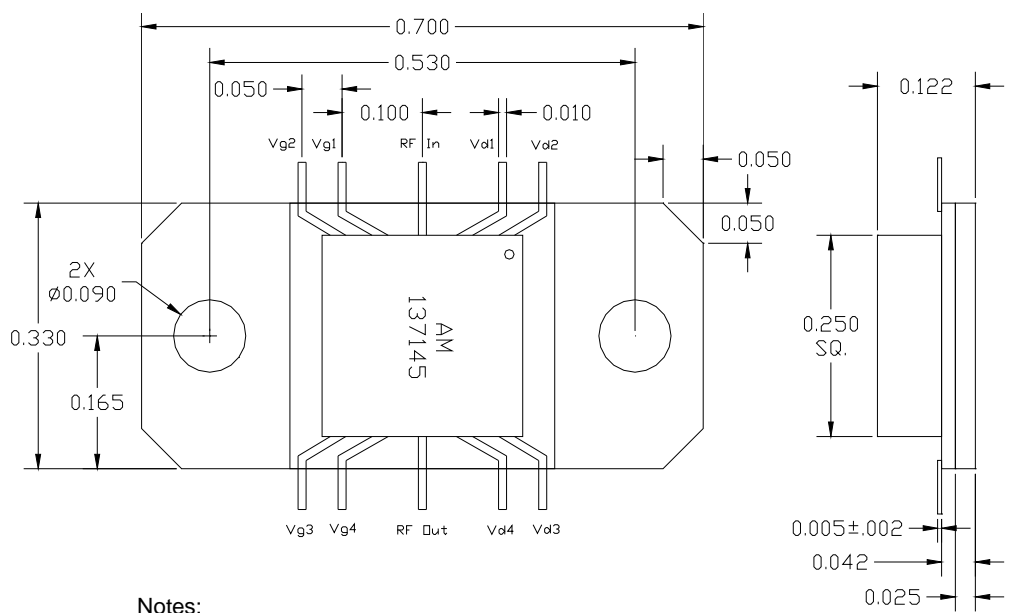
RECOMMENDED TEST BOARD



- Notes:
- 1) Material is Taconic  
 TLE 95-0100-CH/CH with 1 Oz Copper.
  - 2) Metal and Finish Plating is Copper.
  - 3) All vias are plated thru (min via plating thickness = 25um).

 SMT Capacitor 0603 50V  
 SMT Resistor 0603

PACKAGE OUTLINE



- Notes:
1. All dimensions in inches.
  2. Outline tolerance is +/- 5 mils.