

### DESCRIPTION

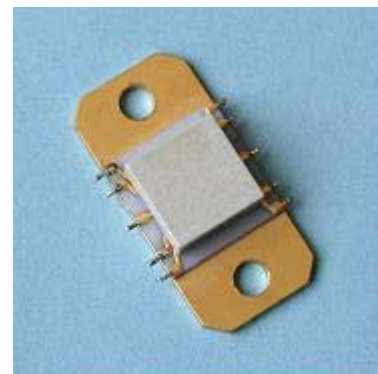
AMCOM's AM13714530WM-SM-R is part of the GaAs MMIC power amplifier series and operates across the 13.75 to 14.5 GHz band. It has over 30 dB gain and 30 dBm output power. The amplifier is packaged in a drop-in ceramic package with RF and DC connections. The device's mounting flange helps to facilitate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

### FEATURES

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

### APPLICATIONS

- VSAT
- Military



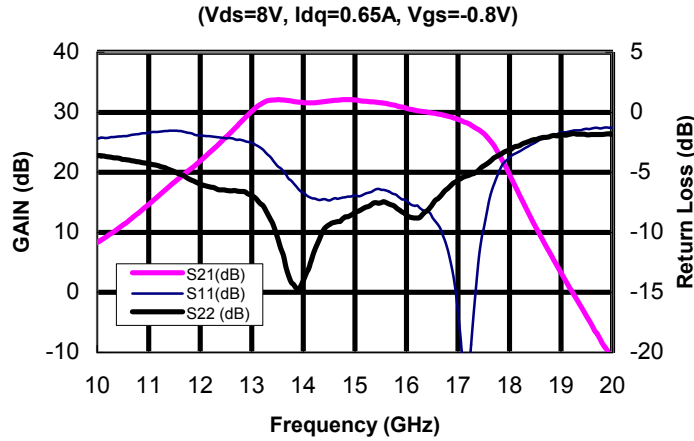
### PERFORMANCE ( $V_{ds} = 8V$ , $I_{dq} = 650mA$ , $T_a = 25^{\circ}C$ )

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

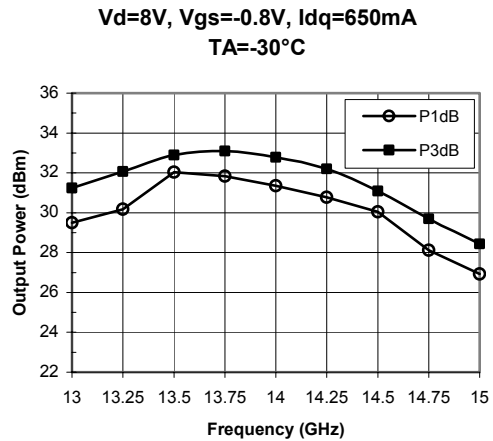
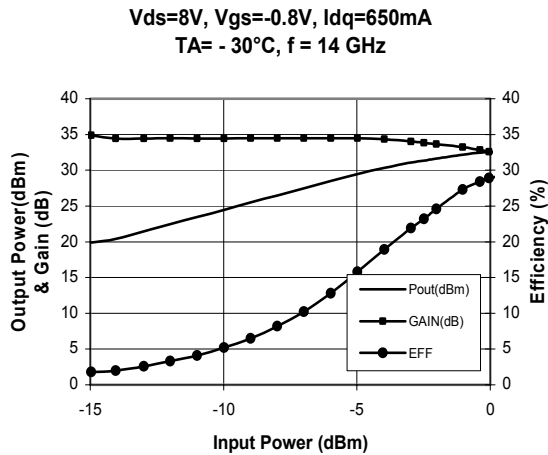
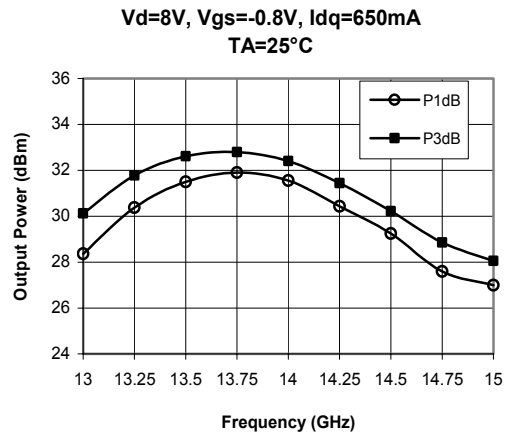
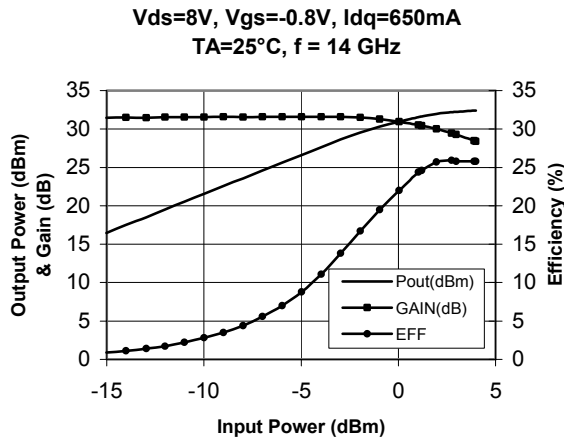
### ABSOLUTE MAXIMUM RATING

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

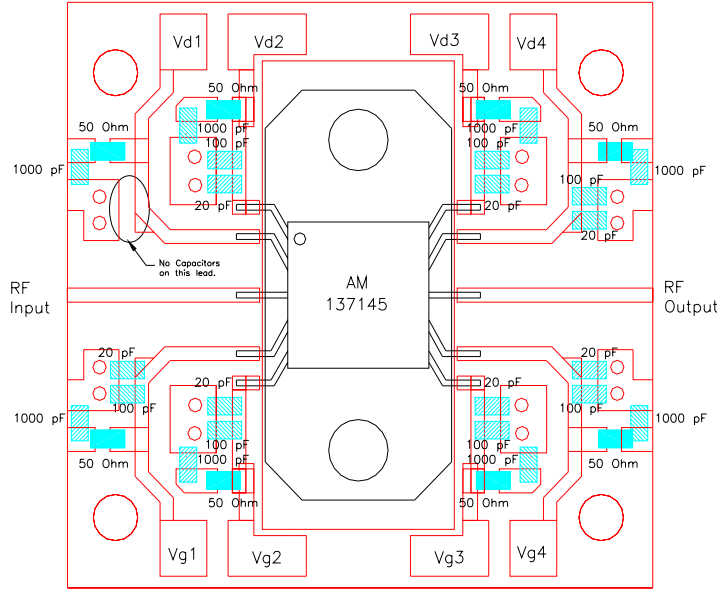
**SMALL SIGNAL DATA**





**POWER DATA**



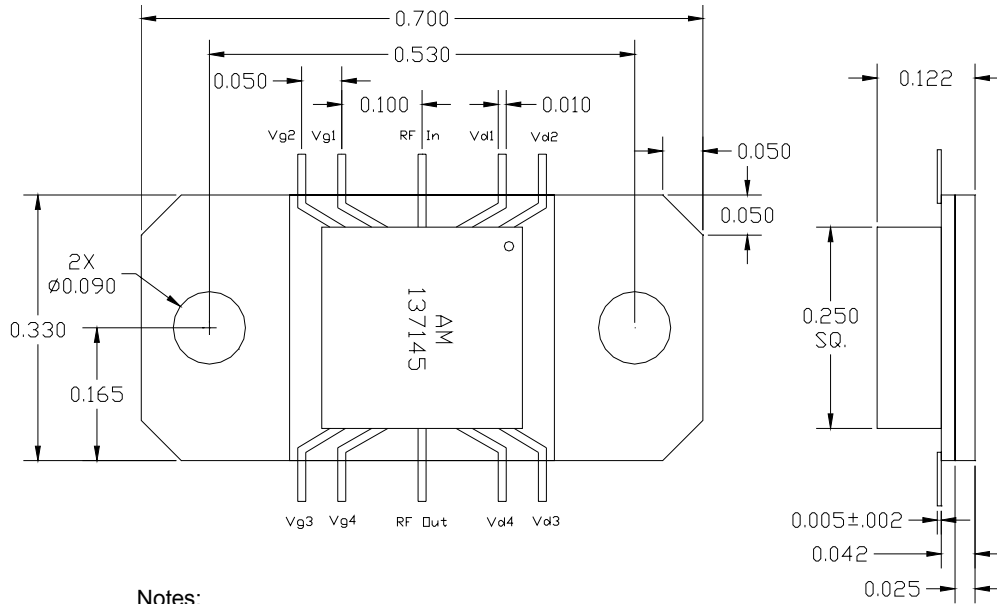
**RECOMMENDED TEST BOARD**



- 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.