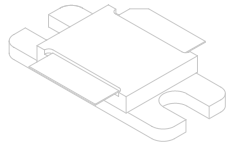


2729-125

125 Watts, 36 Volts, 100µs, 10%
Radar 2700-2900 MHz

<p>GENERAL DESCRIPTION</p> <p>The 2729-125 is an internally matched, COMMON BASE bipolar transistor capable of providing 125 Watts of pulsed RF output power at 100µs pulse width, 10% duty factor across the 2700 to 2900 MHz band. The transistor prematch and test fixture has been optimized through the use of Pulsed Automated Load Pull. This hermetically solder-sealed transistor is specifically designed for S-band radar applications. It utilizes gold metallization and emitter ballasting to provide high reliability and supreme ruggedness.</p>	<p>CASE OUTLINE 55KS-1 Common Base</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation Device Dissipation @ 25°C¹ 350 W</p> <p>Maximum Voltage and Current Collector to Base Voltage (BV_{ces}) 65 V Emitter to Base Voltage (BV_{ebo}) 3.0 V Collector Current (I_c) 15 A</p> <p>Maximum Temperatures Storage Temperature -65 to +200 °C Operating Junction Temperature +200 °C</p>	

ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P _{out}	Power Output	F=2700-2900 MHz	125			W
P _{in}	Power Input	V _{cc} = 36 Volts			15.7	W
P _g	Power Gain	Pulse Width = 100 µs	9.0	9.5		dB
η _c	Collector Efficiency	Duty Factor = 10%	45	55		%
VSWR	Load Mismatch Tolerance ¹	F = 2900 MHz, P _o = 125W			2:1	

FUNCTIONAL CHARACTERISTICS @ 25°C

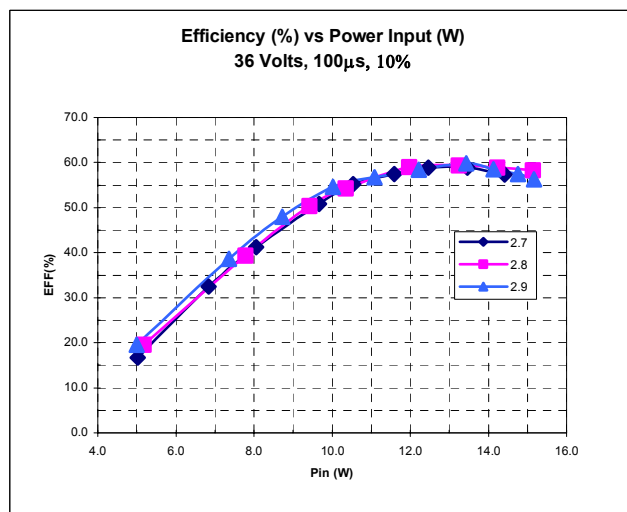
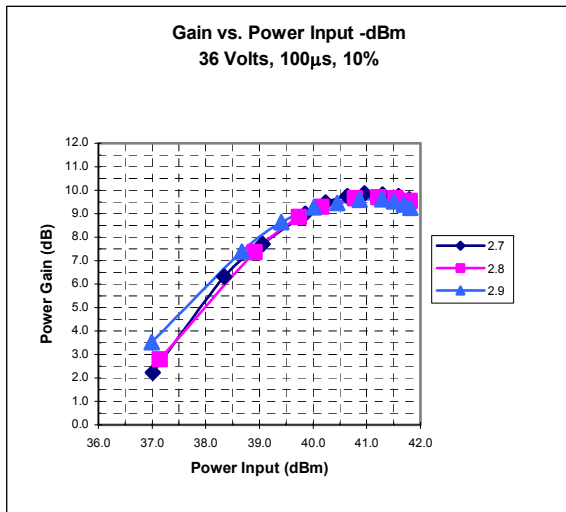
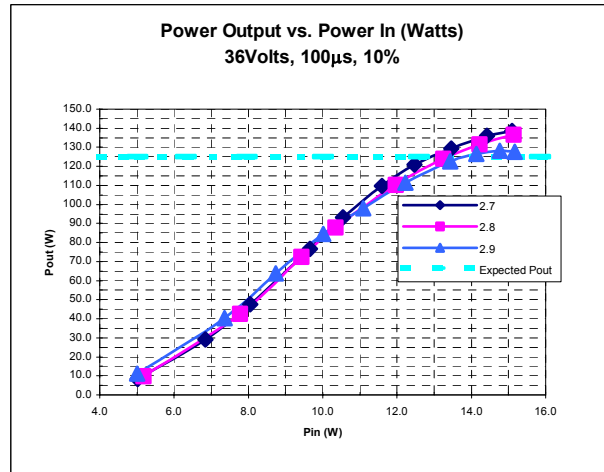
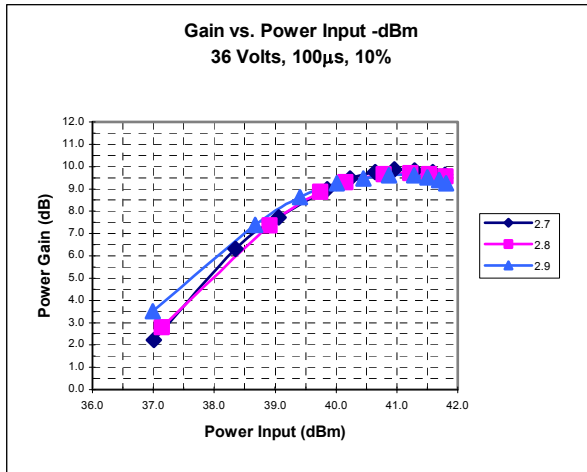
BV _{ebo}	Emitter to Base Breakdown	I _e = 30 mA	3.0			V
BV _{ces}	Collector to Emitter Breakdown	I _c = 120 mA	56	65		V
h _{FE}	DC – Current Gain	V _{ce} = 5V, I _c = 600 mA	18	50		
θ _{jc} ¹	Thermal Resistance				0.5	°C/W

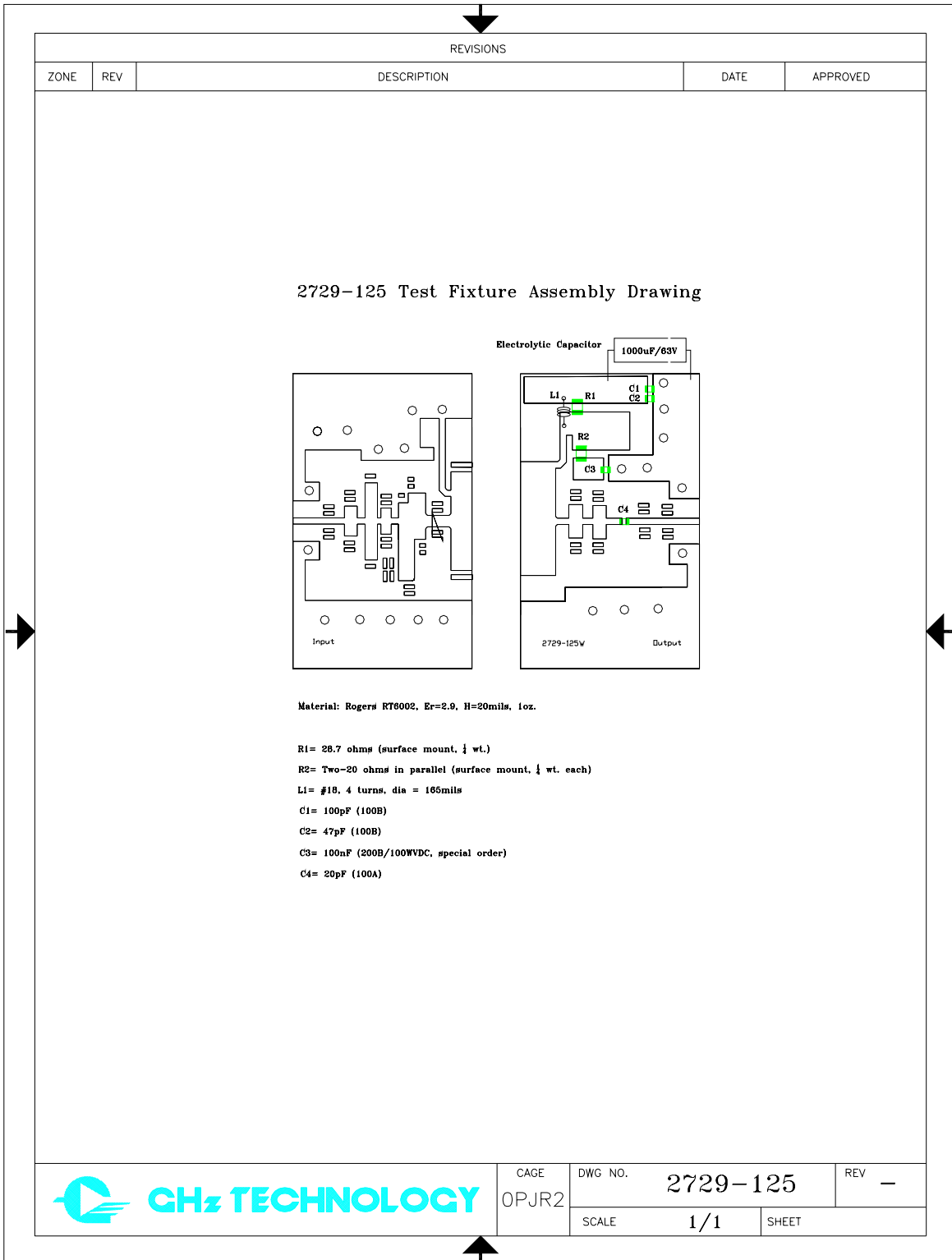
NOTE: 1. At rated output power and pulse conditions

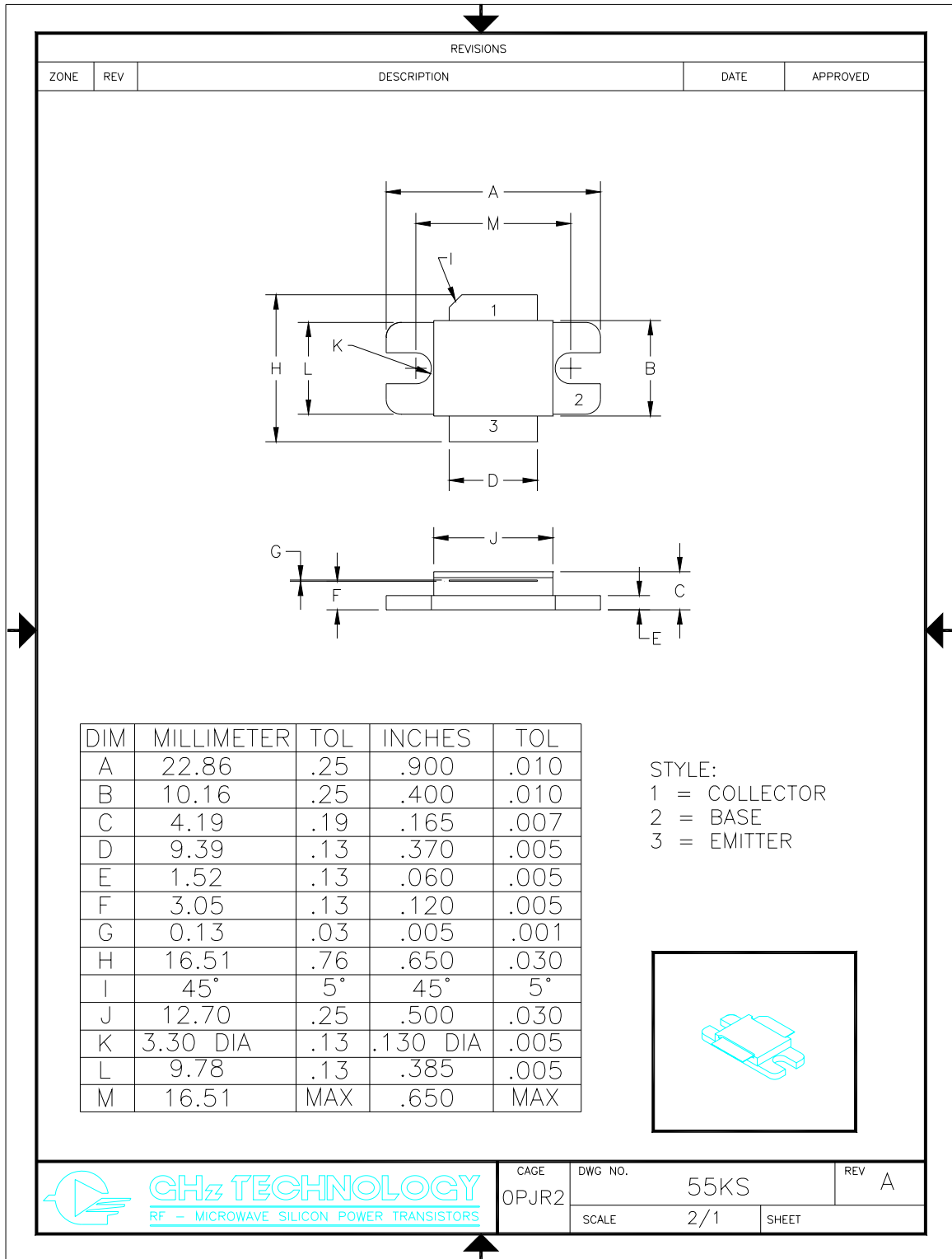
Issue April 2003

Vcc = 36 Volts, Pulse Width = 100µs, Duty = 10%

G2747-2, Unit 7, TF040803P2







GHz TECHNOLOGY
 RF - MICROWAVE SILICON POWER TRANSISTORS

CAGE	DWG NO.	55KS	REV	A
0PJR2	SCALE	2/1	SHEET	