

GENERAL DESCRIPTION

The TPR 700 is a high power COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 1030-1090 MHz. The device has gold thin-film metallization for proven highest MTTF. The transistor includes input returns for **fast rise time**. Low thermal resistance package reduces junction temperature, extends life.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C² 2050 Watts

Maximum Voltage and Current

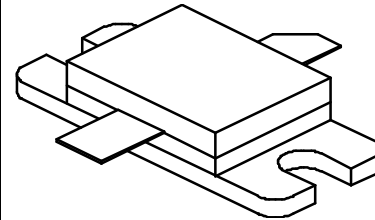
BVces Collector to Base Voltage 65 Volts
BVebo Emitter to Base Voltage 3.5 Volts
Ic Collector Current 55 Amps

Maximum Temperatures

Storage Temperature - 65 to + 200°C
Operating Junction Temperature + 200°C

CASE OUTLINE

**55KT, Style 1
Common Base**


ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Out	F = 1030 MHz	700			Watts
P_{in}	Power Input	V _{cc} = 50 Volts			150	Watts
P_g	Power Gain	PW = 10 μsec	6.7	35		dB
h_c	Collector Efficiency	DF = 1%			70	%
t_r	Rise Time				30:1	ns
VSWR	Load Mismatch Tolerance	F = 1030 MHz				

BVebo³	Emitter to Base Breakdown	I _e = 50mA	3.5			Volts
BVces	Collector to Emitter Breakdown	I _c = 100mA	65			Volts
h_{FE}	DC - Current Gain	I _c = 1000mA, V _{ce} = 5 V	10		0.08	°C/W
qjc²	Thermal Resistance					

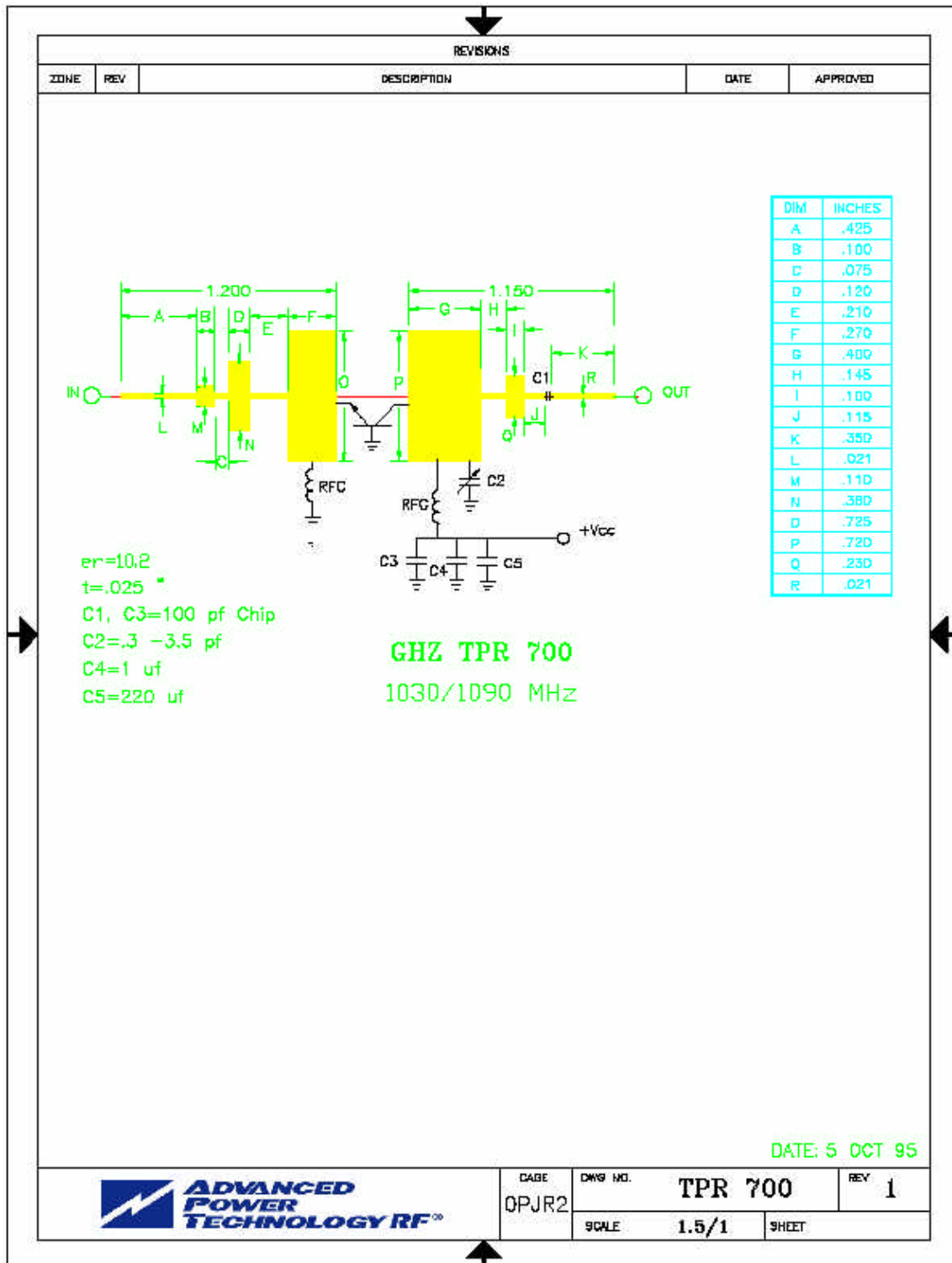
Note 1: At rated output power and pulse conditions

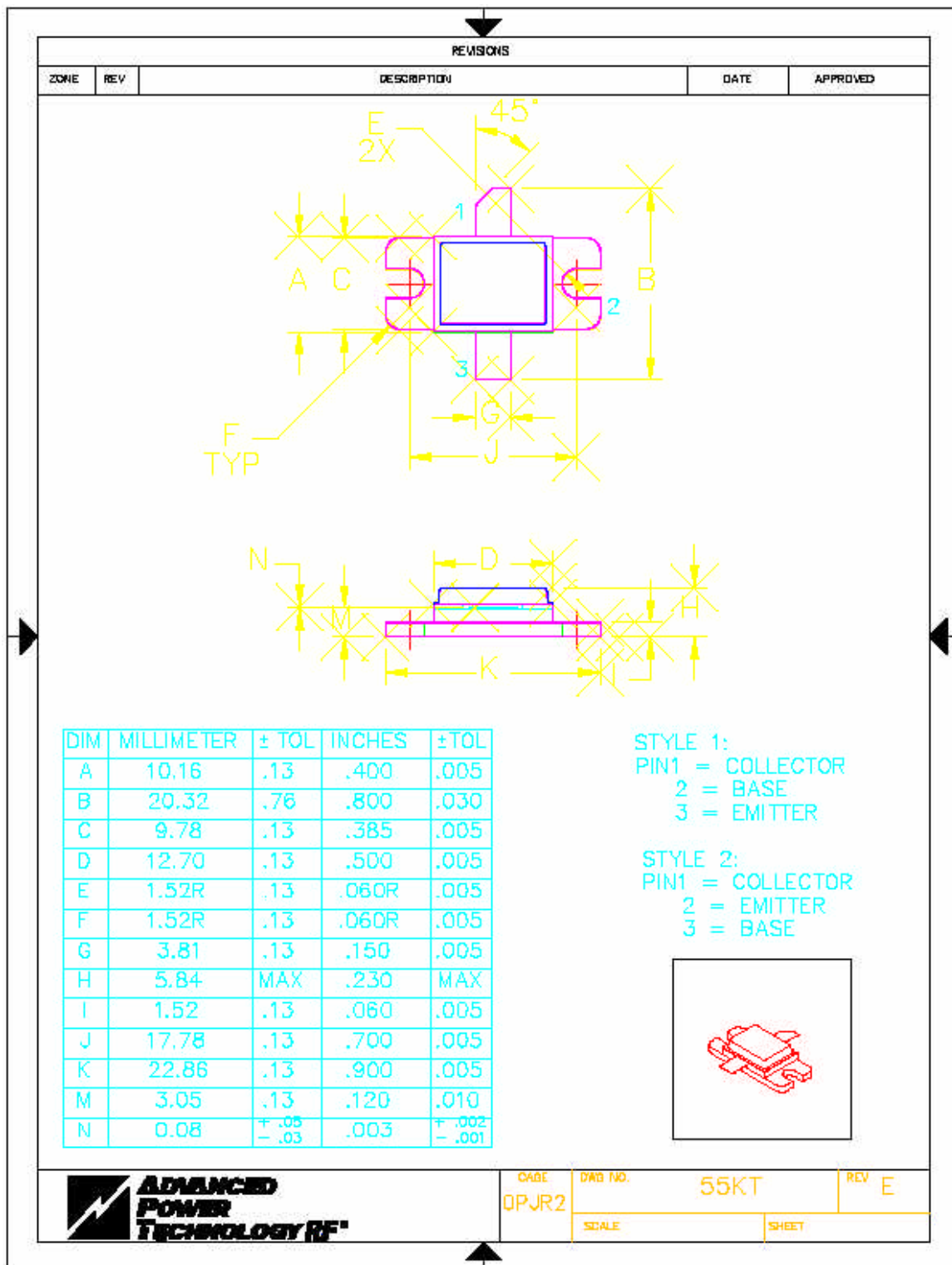
2: At rated pulse conditions

3: Cannot measure due to input return

Rev A. – Sept 2005

TPR700





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