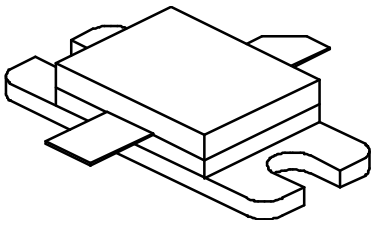
TPR 700

700 Watts, 50 Volts, Pulsed
Avionics 1030 – 1090 MHz

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.

CASE OUTLINE
55KT, Style 1
Common Base



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C[2]	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

ELECTRICAL CHARACTERISTICS @ 25 °C

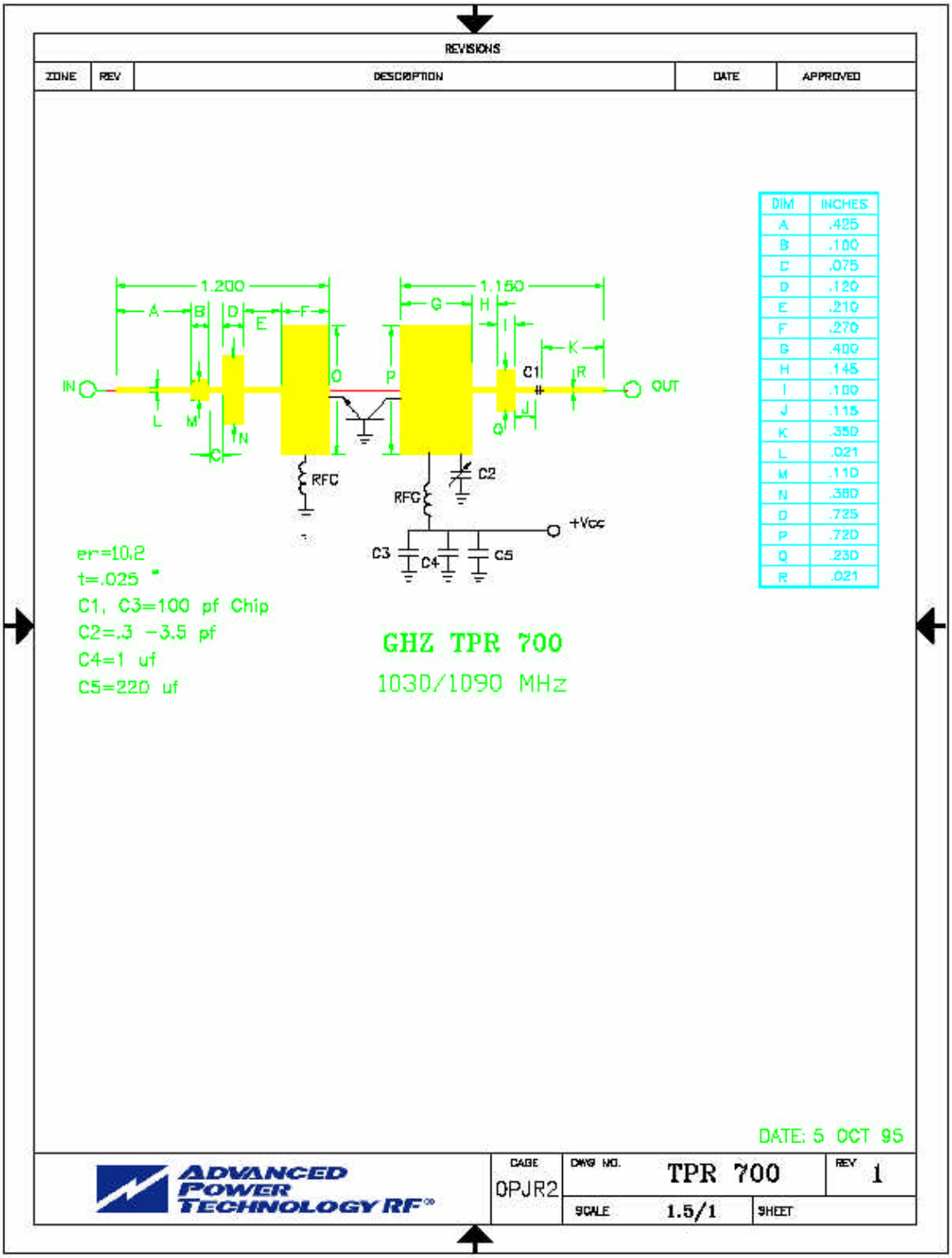
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1030 MHz	700			Watts
Pin	Power Input	Vcc = 50 Volts			150	Watts
Pg	Power Gain	PW = 10 µsec	6.7			dB
h_c	Collector Efficiency	DF = 1%		35		%
t_r	Rise Time				70	ns
VSWR	Load Mismatch Tolerance	F = 1030 MHz			30:1	

BVebo[3]	Emitter to Base Breakdown	Ie = 50mA	3.5			Volts
BVces	Collector to Emitter Breakdown	Ic = 100mA	65			Volts
h_{FE}	DC - Current Gain	Ic = 1000mA, Vce = 5 V	10			
q_{jc}[2]	Thermal Resistance				0.08	°C/W

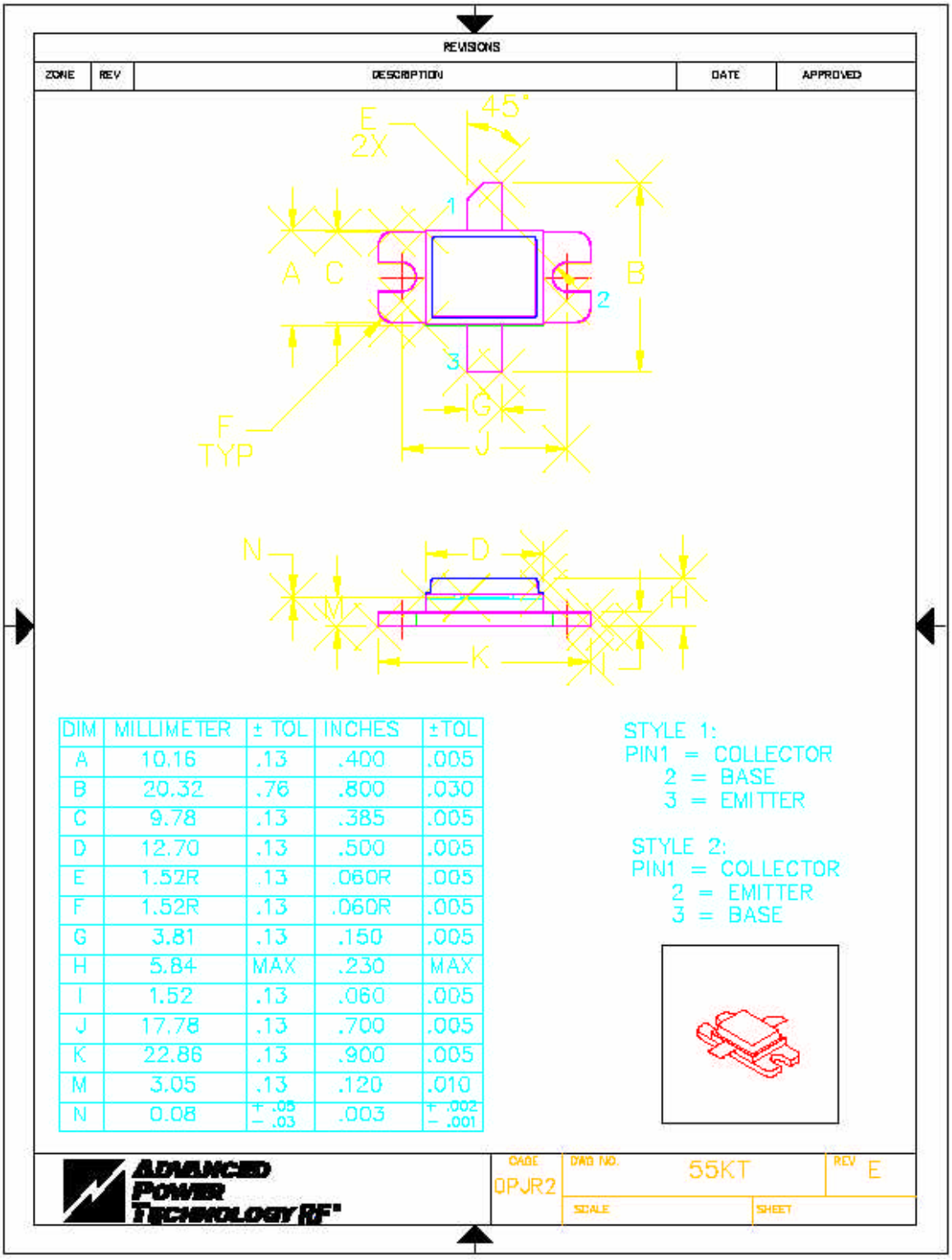
Note 1: At rated output power and pulse conditions
2: At rated pulse conditions
3: Cannot measure due to input return

Rev A. – Sept 2005

Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein. Visit our web site at www.advancedpower.com or contact our factory direct.



Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein. Visit our web site at www.advancedpower.com or contact our factory direct.



DIM	MILLIMETER	± TOL	INCHES	±TOL
A	10.16	.13	.400	.005
B	20.32	.76	.800	.030
C	9.78	.13	.385	.005
D	12.70	.13	.500	.005
E	1.52R	.13	.060R	.005
F	1.52R	.13	.060R	.005
G	3.81	.13	.150	.005
H	5.84	MAX	.230	MAX
I	1.52	.13	.060	.005
J	17.78	.13	.700	.005
K	22.86	.13	.900	.005
M	3.05	.13	.120	.010
N	0.08	+.05 −.03	.003	+.002 −.001

STYLE 1:
PIN1 = COLLECTOR
2 = BASE
3 = EMITTER

STYLE 2:
PIN1 = COLLECTOR
2 = EMITTER
3 = BASE

ADVANCED POWER TECHNOLOGY RF

CAGE 0PJR2 | DWG NO. 55KT | REV E | SCALE | SHEET

Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein. Visit our web site at www.advancedpower.com or contact our factory direct.