GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

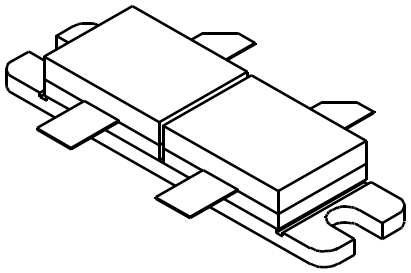
TPR 1000

1000 Watts, 45 Volts, Pulsed
Avionics 1090 MHz

GENERAL DESCRIPTION

The TPR 1000 is a high power COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 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
55KV, Style 1
Common Base



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC[2]	2900 Watts
Maximum Voltage and Current	
BVces Collector to Base Voltage	65 Volts
BVebo Emitter to Base Voltage	3.5 Volts
Ic Collector Current	80 Amps
Maximum Temperatures	
Storage Temperature	- 65 to + 200ºC
Operating Junction Temperature	+ 200ºC

ELECTRICAL CHARACTERISTICS @ 25 ^{O}C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1090 MHz	1000			Watts
Pin	Power Input	Vcc = 45 Volts			250	Watts
Pg	Power Gain	PW = 10 µsec	6.0			dB
η_c	Collector Efficiency	DF = 1%		43		%
t_r	Rise Time				70	ns
VSWR[1]	Load Mismatch Tolerance	F = 1030 MHz			9:1	

Bvebo[3,4]	Emitter to Base Breakdown	Ie = 50mA	3.5			Volts
BVces[4]	Collector to Emitter Breakdown	Ic = 100mA	65			Volts
h_{FE}[4]	DC - Current Gain	Ic = 1000mA, Vce = 5 V	10			
θjc[2]	Thermal Resistance				0.06	ºC/W

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

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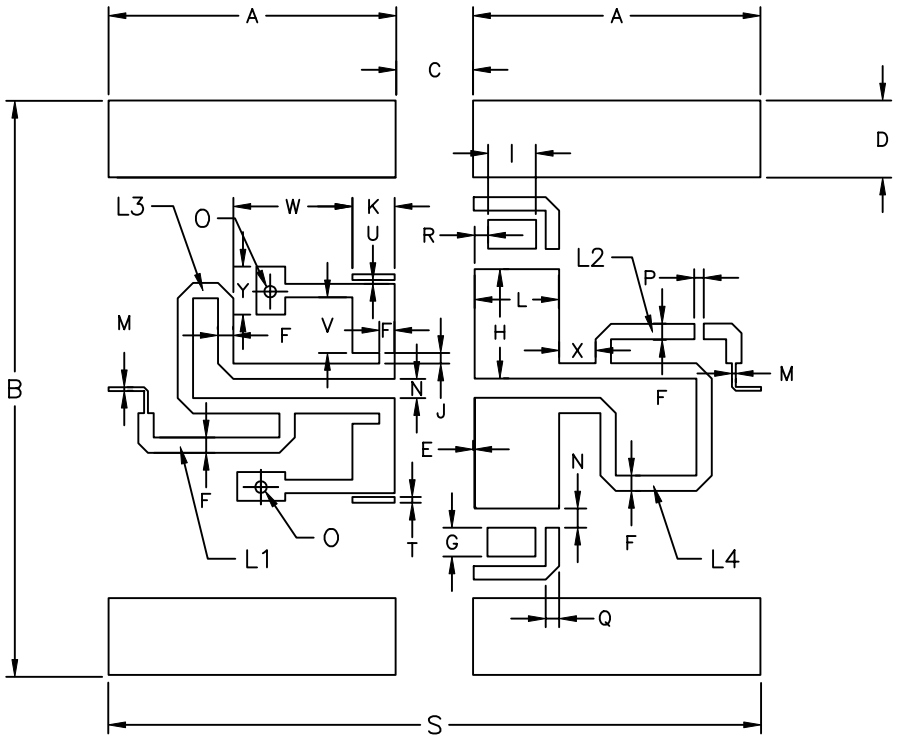
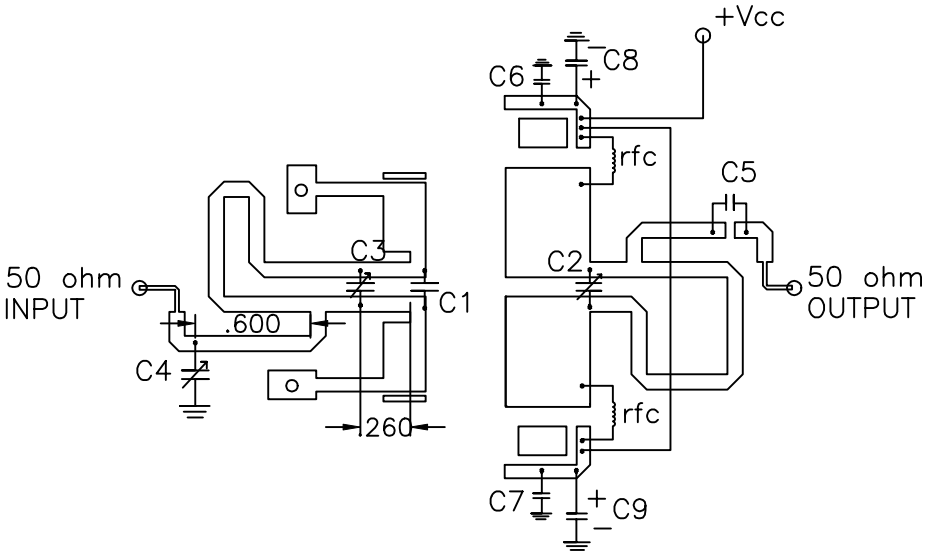
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



DIM	INCHES
A	1.500
B	3.000
C	.406
D	.4045
E	.004
F	.080
G	.150
H	.569
I	.254
J	.054
K	.220
L	.440
M	.019
N	.100
O	ø0.060
P	.050
Q	.074
R	.079
S	3.406
T	.030
U	.020
V	.290
W	0.615
X	0.175
Y	0.250
L1, L2	1.05
L3, L4	2.10



C1=4.7pf ATC B
C2=1-10pf Voltronics EJ10HV.
C3,C4=.5-3.5pf Johnson
C5=47pf ATC B
C6,C7=82pf ATC B
C8,C9=250MFD 60v

Board Type :
Ceramic
Er=10.2
Thk=.025inches.

	CAGE	DWG NO.	REV
GHz TECHNOLOGY	0PJR2	TPR1000	–
		SCALE 1/1	SHEET