

TPR 1000

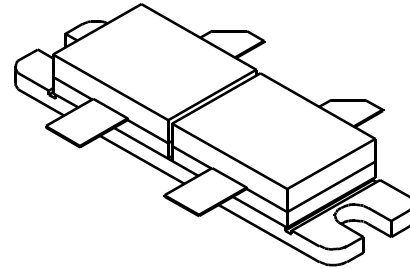
1000 Watts, 45 Volts, Pulsed
Avionics 1090 MHz

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 MTF. 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 @ 25°C 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 + 200°C
Operating Junction Temperature	+ 200°C

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Out	F = 1090 MHz	1000			Watts
P_{in}	Power Input	V _{cc} = 45 Volts			250	Watts
P_g	Power Gain	PW = 10 μsec	6.0			dB
η_c	Collector Efficiency	DF = 1%		43		%
t_r	Rise Time				70	ns
VSWR¹	Load Mismatch Tolerance	F = 1030 MHz			9:1	

Bvebo^{3,4}	Emitter to Base Breakdown	I _e = 50mA	3.5			Volts
BVces⁴	Collector to Emitter Breakdown	I _c = 100mA	65			Volts
h_{FE}⁴	DC - Current Gain	I _c = 1000mA, V _{ce} = 5 V	10			
θ_{jc}²	Thermal Resistance				0.06	°C/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

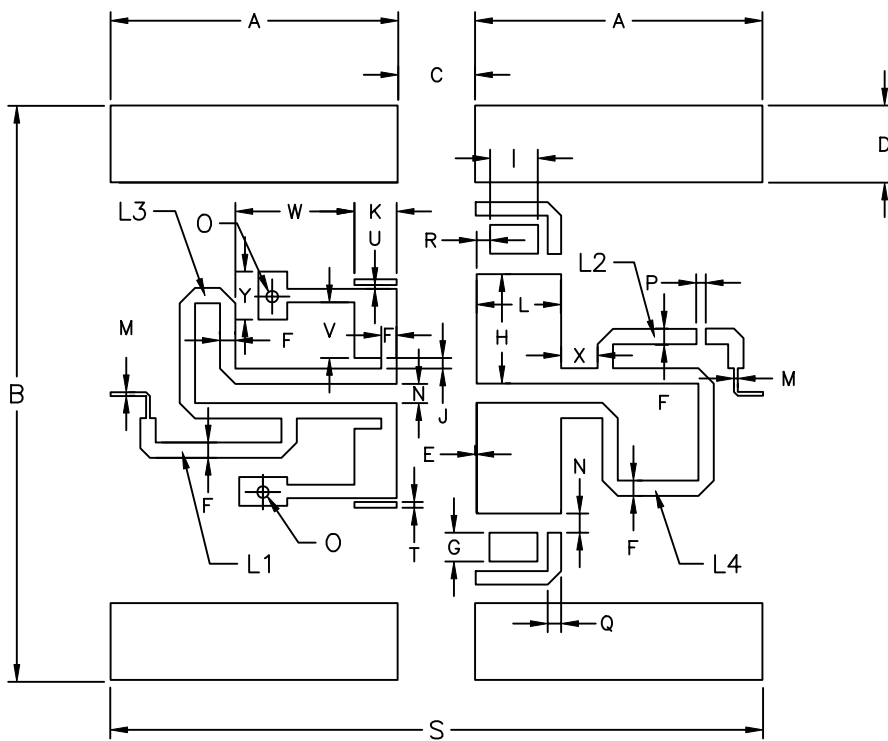
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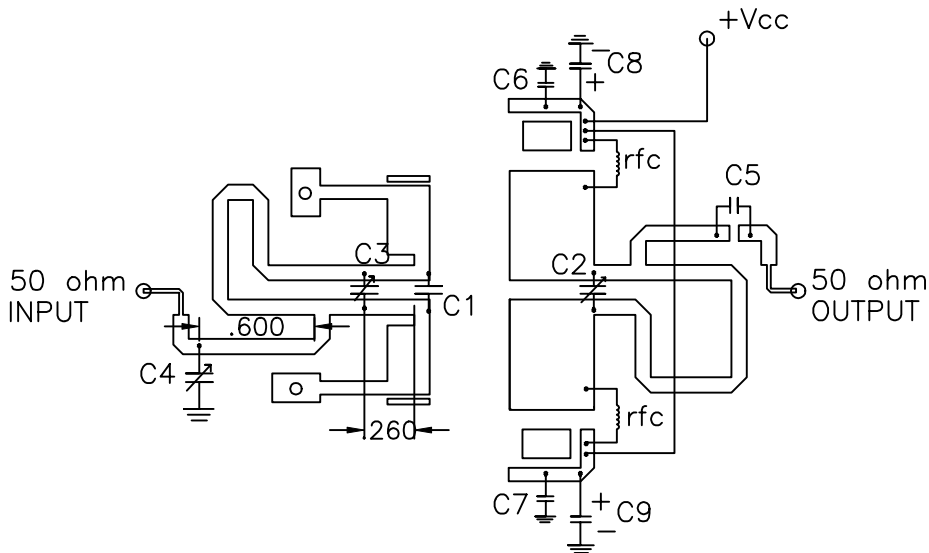
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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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	∅0.060
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.	TPR1000	REV	-
0PJR2	SCALE	1/1	SHEET	