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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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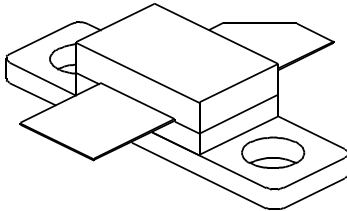
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# TPR 400

400 Watts, 50 Volts, Pulsed  
Avionics 1030 - 1090 MHz

<p><b>GENERAL DESCRIPTION</b></p> <p>The TPR 400 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 MTF. The transistor includes input prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.</p>	<p><b>CASE OUTLINE</b> <b>55CX, STYLE 1</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C<sup>2</sup> 875 Watts</p> <p><b>Maximum Voltage and Current</b></p> <p>BVces Collector to Base Voltage 55 Volts BVebo Emitter to Base Voltage 4.0 Volts Ic Collector Current 30 Amps</p> <p><b>Maximum Temperatures</b></p> <p>Storage Temperature - 65 to + 150°C Operating Junction Temperature + 200°C</p>	

## ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>Pout</b>	Power Out	F = 1030-1090 MHz	400			Watts
<b>Pin</b>	Power Input	Vcc = 50 Volts			75	Watts
<b>Pg</b>	Power Gain	PW = 10 μsec	7.27			dB
$\eta_c$	Collector Efficiency	DF = 1%		40		%
<b>VSWR</b>	Load Mismatch Tolerance	F = 1090 MHz			20:1	

<b>BVebo</b>	Emitter to Base Breakdown	Ie = 20 mA	4.0			Volts
<b>BVces</b>	Collector to Emitter Breakdown	Ic = 25 mA	55			Volts
<b>h<sub>FE</sub></b>	DC - Current Gain	Ic = 2.5 A, Vce = 5 V	10		100	
<b>θ<sub>jc</sub><sup>2</sup></b>	Thermal Resistance				0.2	°C/W

Note 1: At rated output power and pulse conditions

2: At rated pulse conditions

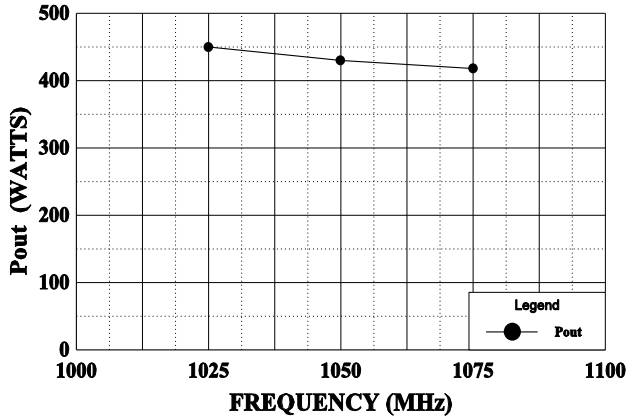
Issue B, February 1998

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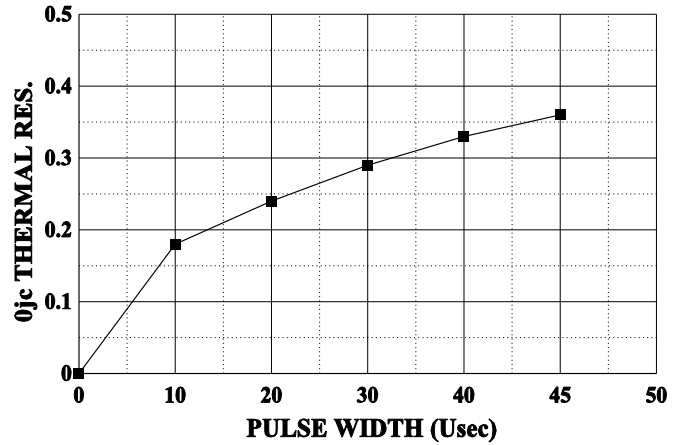
**POWER OUTPUT vs FREQUENCY**

Vcc = 50 V, Pin = 75 W



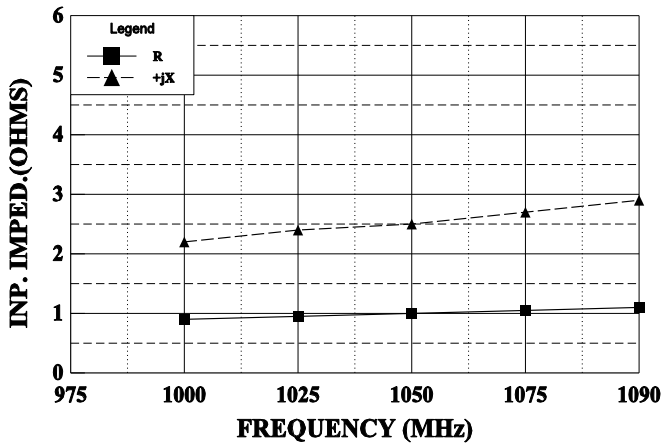
**THERMAL RESISTANCE vs PULSE WIDTH**

Vcc = 50 V, F = 1090 MHz



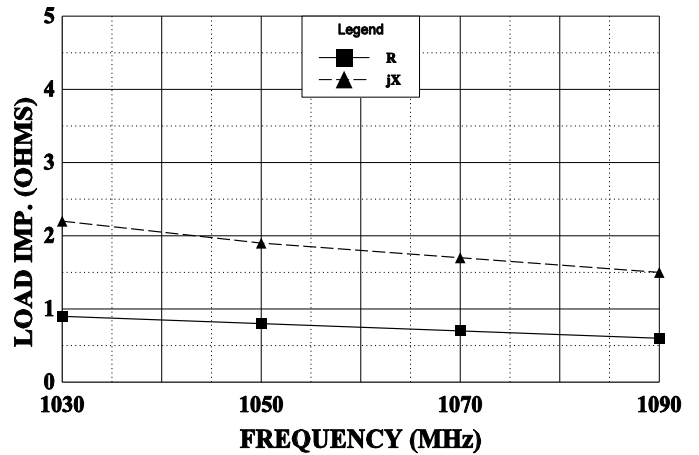
**SERIES INPUT IMPEDANCE vs FREQUENCY**

Vcc = 50 V, Pin = 75 W



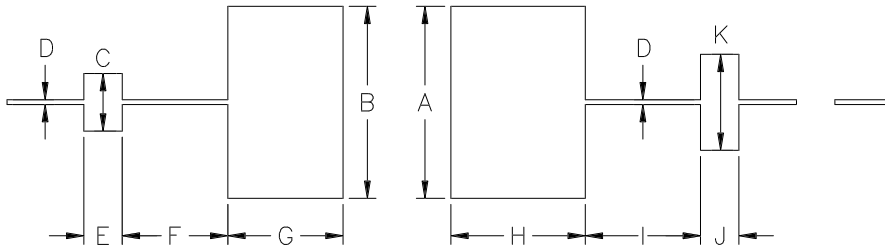
**SERIES LOAD IMPEDANCE vs FREQUENCY**

Vcc = 50 V, Pin = 75 W



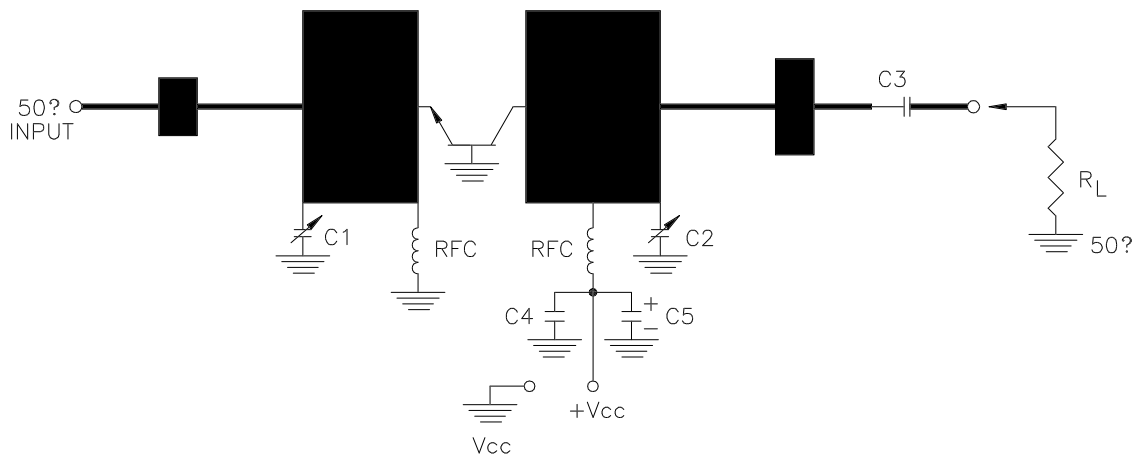
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	1.000
B	1.000
C	.300
D	.025
E	.200
F	.550
G	.600
H	.700
I	.600
J	.200
K	.500

DME 375 / TPR 400 TEST FIXTURE  
1030/1090 MHz – TEST AMPLIFIER (FIG1)



- MICROSTRIP LINE: DUROID, 10 MIL DIELECTRIC D 5880
- C1, C2 – 0.6–6pf VAR. CAP.
- C3, C4 – 82 pf CHIP
- C5 – 200 MFD CAP.