



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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!



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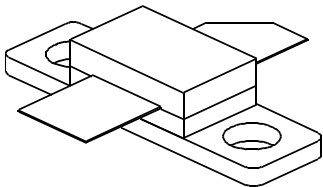
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TPR 175

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

<p>GENERAL DESCRIPTION</p> <p>The TPR 175 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 style="text-align: center;">CASE OUTLINE 55CX, STYLE 1</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C² 388 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Base Voltage 55 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 12.5 Amps</p> <p>Maximum Temperatures</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
Pout	Power Out	F = 1090 MHz	175			Watts
Pin	Power Input	Vcc = 50 Volts			25	Watts
Pg	Power Gain	PW = 10 μsec	8.0	9.0		dB
η_c	Collector Efficiency	DF = 1%		40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			00:1	
BVebo	Emitter to Base Breakdown	Ie = 5 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	Ic = 20 mA	55			Volts
h_{FE}	DC - Current Gain	Ic = 20 mA, Vce = 5V	10			
θ_{jc}^2	Thermal Resistance				0.45	°C/W

Note 1: At rated output power and pulse conditions
 2: At rated pulse conditions

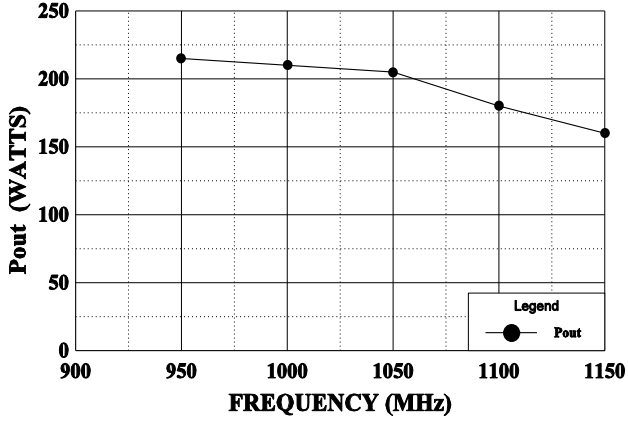
Issue A February 1998

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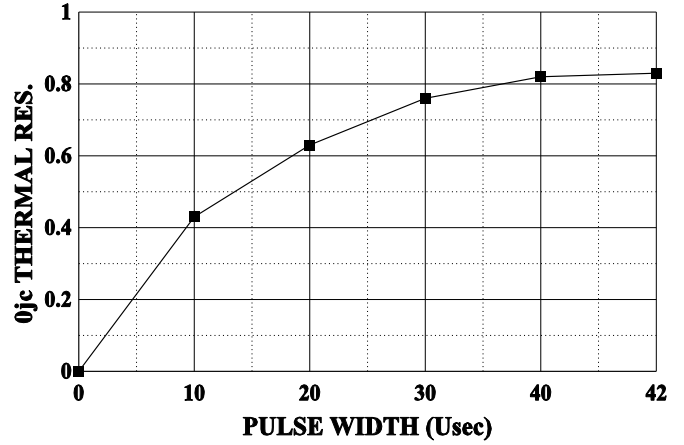
POWER OUTPUT vs FREQUENCY

Vcc = 50 V, Pin = 25 W



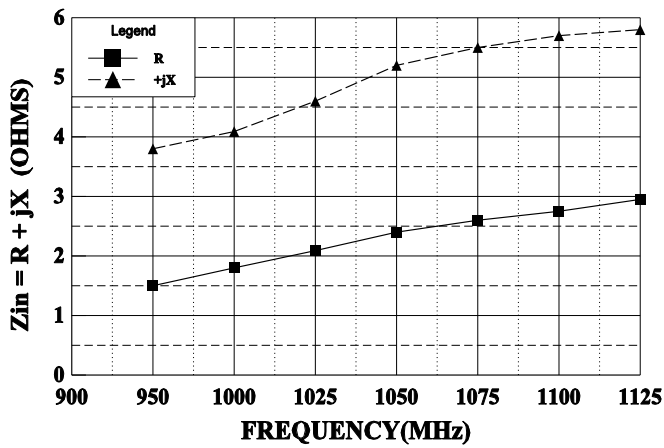
THERMAL RESISTANCE vs PULSE WIDTH

Vcc = 50 V, Tf = 30°C



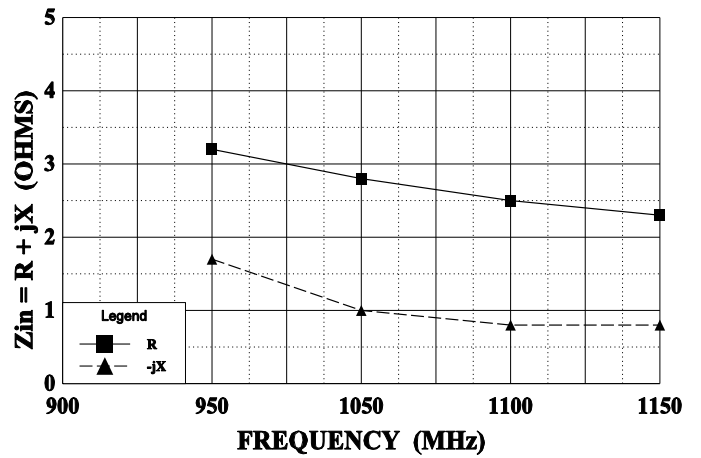
SERIES INPUT IMPEDANCE vs FREQUENCY

Vcc = 50 V, Po = 175 W



SERIES LOAD IMPEDANCE vs FREQUENCY

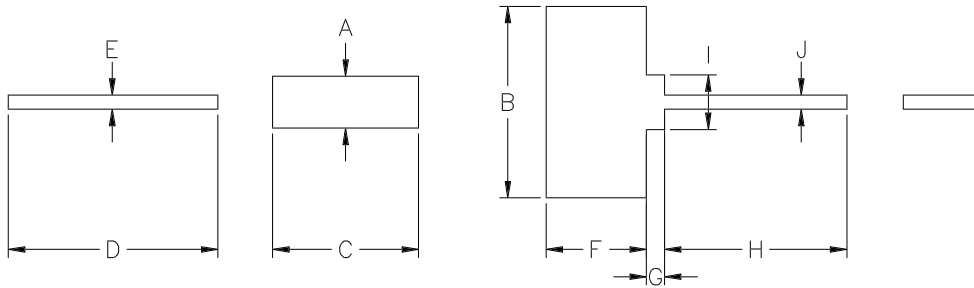
Vcc = 50 V, Po = 175 W



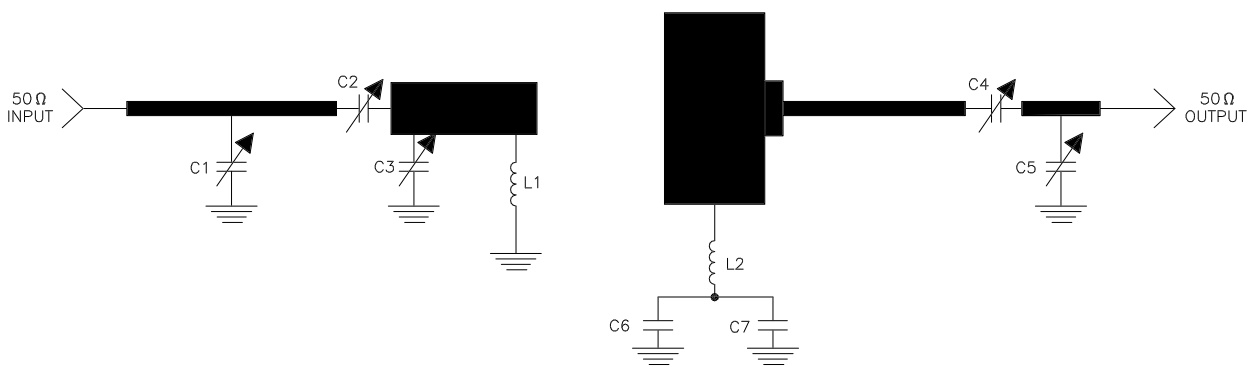
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	.285
B	1.050
C	.800
D	1.150
E	.078
F	.550
G	.100
H	1.000
I	.300
J	.078



1030/1090 TEST AMPLIFIER



Material 1/32" Teflon Fiberglass
 C1,C3,C5 = .3-3.5 Johanson
 C2,C4 = .6-6 Johanson
 C6 = 82pf A.T.C.
 C7 = 200µf Electrolytic
 L1 = #18 AWG 0.6" LONG
 L2 = #18 AWG 1.0" LONG



CAGE OPJR2	DWG NO. TPR 175	REV A
	SCALE 1/1	SHEET