

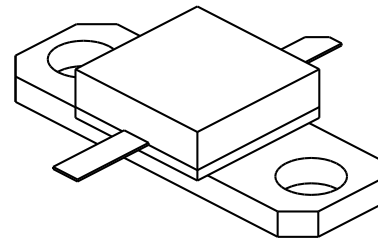
# TAN15

15 Watts, 40 Volts, Pulsed  
Avionics 960 - 1215 MHz

## GENERAL DESCRIPTION

The TAN15 is a COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 960-1215 MHz. The device has gold thin-film metallization and diffused ballasting for proven highest MTTF. The transistor includes input prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.

## CASE OUTLINE 55LT, STYLE 1



## ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C <sup>2</sup>	175 Watts
<b>Maximum Voltage and Current</b>	
BVces Collector to Base Voltage	50 Volts
BVebo Emitter to Base Voltage	4.0 Volts
Ic <sup>2</sup> Collector Current	2.0 Amps
<b>Maximum Temperatures</b>	
Storage Temperature	- 65 to + 150°C
Operating Junction Temperature	+ 200°C

## ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>Pout</b>	Power Out	F = 960-1215 MHz	15			Watts
<b>Pin</b>	Power Input	Vcc = 40 Volts			3.0	Watts
<b>Pg</b>	Power Gain	PW = 20 μsec	7.0	8.0		dB
<b>ηc</b>	Collector Efficiency	DF = 5%		40		%
<b>VSWR</b>	Load Mismatch Tolerance	F = 1090 MHz			10:1	

<b>BVebo</b>	Emitter to Base Breakdown	Ie = 5 mA	3.5			Volts
<b>BVces</b>	Collector to Emitter Breakdown	Ic = 10 mA	50			Volts
<b>hFE</b>	DC - Current Gain	Ic = 10 mA, Vce = 5 V			1.0	°C/W
<b>θjc<sup>2</sup></b>	Thermal Resistance					

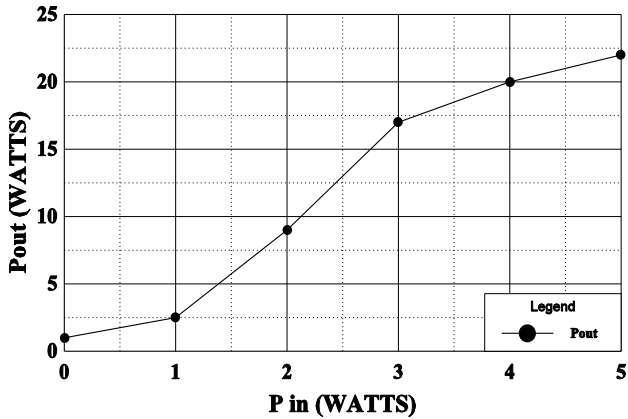
Note 1: At rated output power and pulse conditions  
2: At rated pulse conditions

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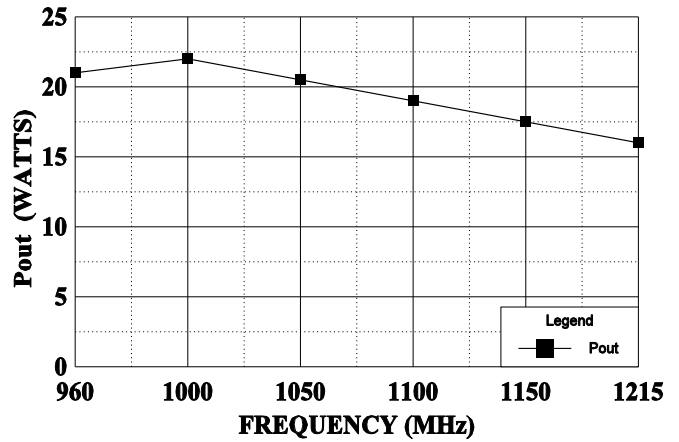
### POWER OUTPUT vs POWER INPUT

Vcc = 40 V, 1090 MHz



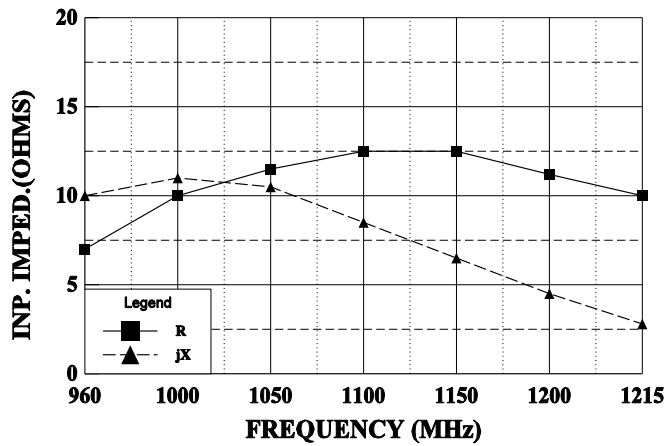
### POWER OUTPUT VS FREQUENCY

Vcc = 40V, Pin = 3.0 W



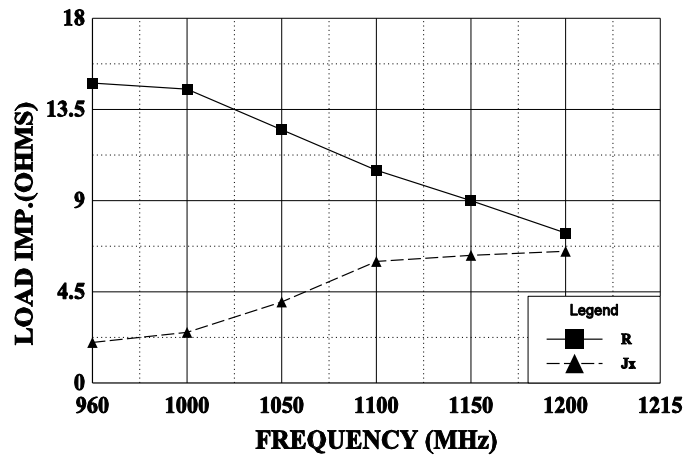
### SERIES INPUT IMPEDANCE vs FREQUENCY

Vcc = 40 V, Pin = 15 W



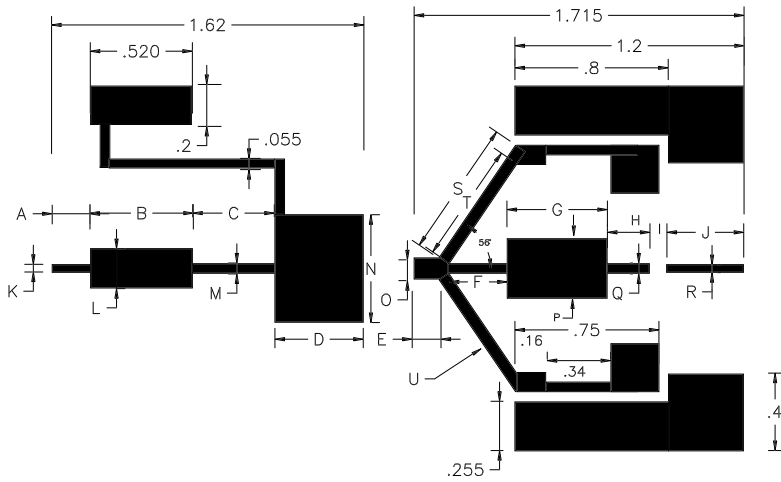
### SERIES LOAD IMPEDANCE vs FREQUENCY

Vcc = 40 V, Po = 15 W



REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	.200
B	.530
C	.430
D	.460
E	.125
F	.300
G	.520
H	.240
I	.070
J	.400
K	.040
L	.205
M	.050
N	.560
O	.110
P	.310
Q	.050
R	.040
S	.710
T	.610
U	.060

TAN 15 TEST CIRCUIT

file:tan15ckt.dwg 8/17/95 jc

DIELECTRIC = 15 MIL THICK TFE Er = 2.55



**CHz TECHNOLOGY**

CAGE  
OPJR2

DWG NO.

**TAN 15**

REV —

SCALE

**1/1**

SHEET

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