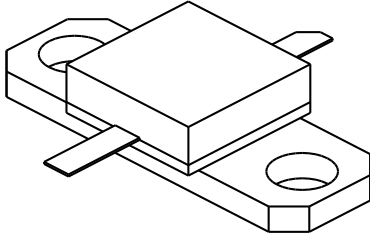


TAN15

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

<p>GENERAL DESCRIPTION</p> <p>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 MTF. The transistor includes input prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.</p>	<p>CASE OUTLINE 55LT, STYLE 1</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C² 175 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Base Voltage 50 Volts BVebo Emitter to Base Voltage 4.0 Volts Ic² Collector Current 2.0 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 = 960-1215 MHz	15			Watts
Pin	Power Input	Vcc = 40 Volts			3.0	Watts
Pg	Power Gain	PW = 20 μsec	7.0	8.0		dB
ηc	Collector Efficiency	DF = 5%		40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			10:1	

BVebo	Emitter to Base Breakdown	Ie = 5 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	Ic = 10 mA	50			Volts
hFE	DC - Current Gain	Ic = 10 mA, Vce = 5 V			1.0	°C/W
θjc²	Thermal Resistance					

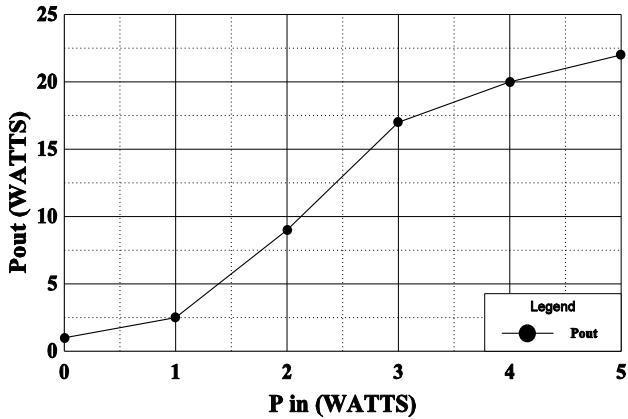
Note 1: At rated output power and pulse conditions
 Note 2: At rated pulse conditions

Issue December 1995

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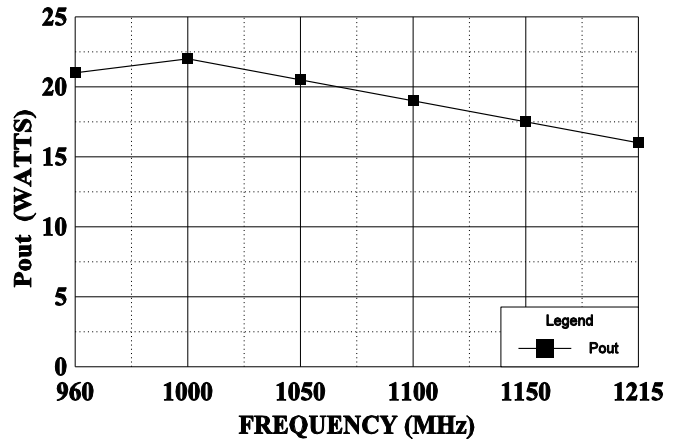
POWER OUTPUT vs POWER INPUT

Vcc = 40 V, 1090 MHz



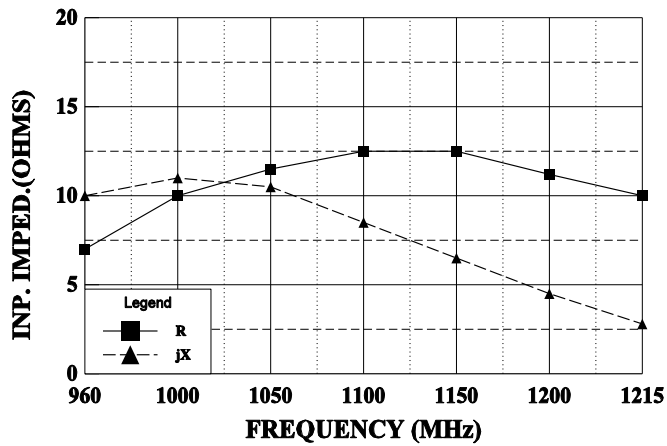
POWER OUTPUT VS FREQUENCY

Vcc = 40V, Pin = 3.0 W



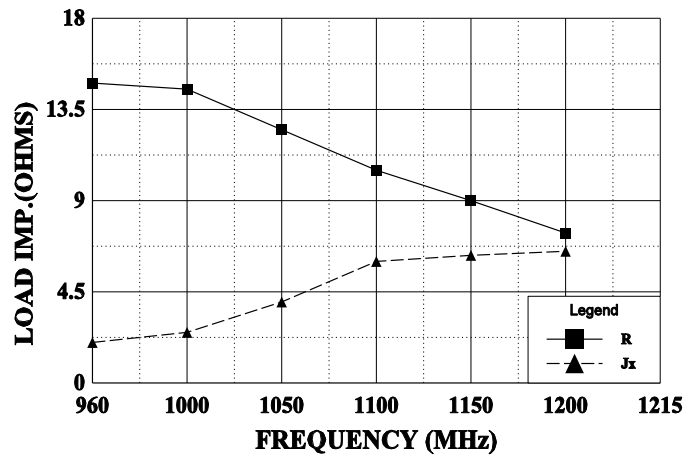
SERIES INPUT IMPEDANCE vs FREQUENCY

Vcc = 40 V, Pin = 15 W



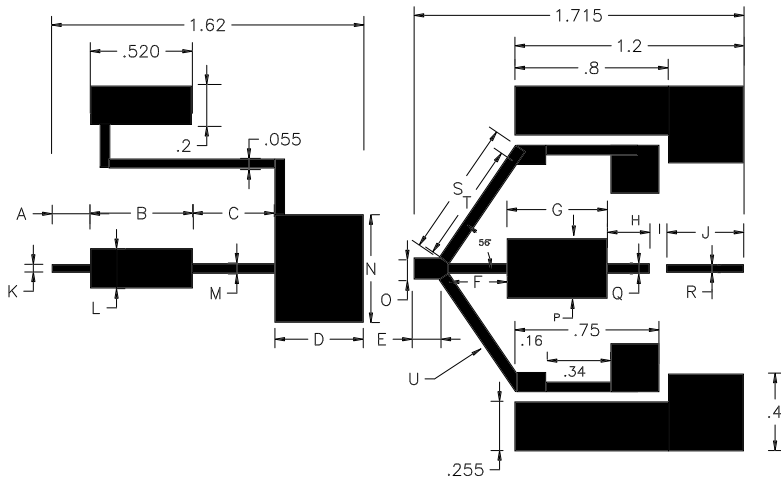
SERIES LOAD IMPEDANCE vs FREQUENCY

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