

TAN15

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

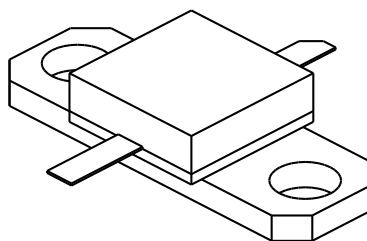
GENERAL DESCRIPTION

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.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C ²		175 Watts
Maximum Voltage and Current		
BV _{ces}	Collector to Base Voltage	50 Volts
BV _{ebo}	Emitter to Base Voltage	4.0 Volts
I _c ²	Collector Current	2.0 Amps
Maximum Temperatures		
Storage Temperature		- 65 to + 150°C
Operating Junction Temperature		+ 200°C

CASE OUTLINE 55LT, STYLE 1



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P _{out}	Power Out	F = 960-1215 MHz	15			Watts
P _{in}	Power Input	V _{cc} = 40 Volts			3.0	Watts
P _g	Power Gain	PW = 20 μsec	7.0	8.0		dB
η _c	Collector Efficiency	DF = 5%		40		%
V _{SWR}	Load Mismatch Tolerance	F = 1090 MHz			10:1	

BV _{ebo}	Emitter to Base Breakdown	I _e = 5 mA	3.5			Volts
BV _{ces}	Collector to Emitter Breakdown	I _c = 10 mA	50			Volts
h _{FE}	DC - Current Gain	I _c = 10 mA, V _{ce} = 5 V			1.0	°C/W
θ _{jc} ²	Thermal Resistance					

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

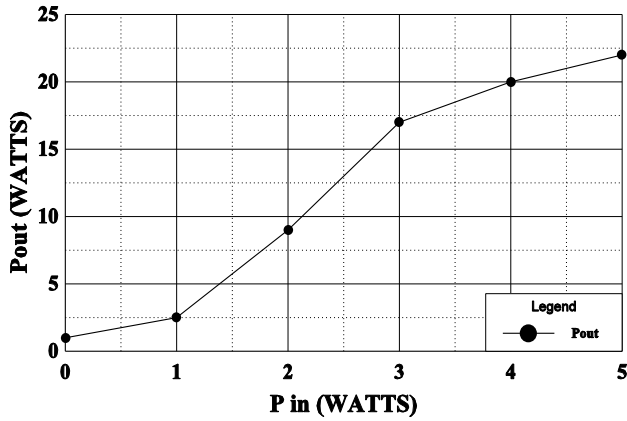
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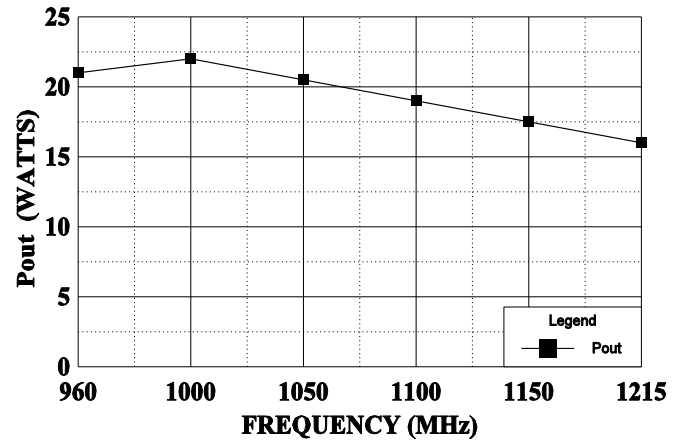
POWER OUTPUT vs POWER INPUT

$V_{cc} = 40\text{ V}$, 1090 MHz



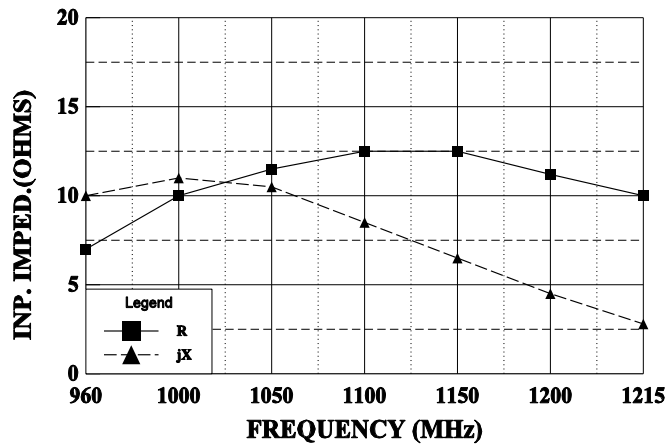
POWER OUTPUT VS FREQUENCY

$V_{cc} = 40\text{ V}$, $P_{in} = 3.0\text{ W}$



SERIES INPUT IMPEDANCE vs FREQUENCY

$V_{cc} = 40\text{ V}$, $P_{in} = 15\text{ W}$



SERIES LOAD IMPEDANCE vs FREQUENCY

$V_{cc} = 40\text{ V}$, $P_o = 15\text{ W}$

