GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

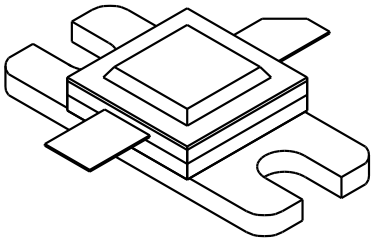
TAN150

150 Watts, 50 Volts, Pulsed
Avionics 960 - 1215 MHz

GENERAL DESCRIPTION

The TAN150 is a high power 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 and output prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.

CASE OUTLINE
55AW, STYLE 1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC[2]	583 Watts
Maximum Voltage and Current	
BVces Collector to Base Voltage	55 Volts
BVebo Emitter to Base Voltage	3.5 Volts
Ic Collector Current	15 Amps
Maximum Temperatures	
Storage Temperature	- 65 to + 150ºC
Operating Junction Temperature	+ 200ºC

ELECTRICAL CHARACTERISTICS @ 25 ^{O}C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 960-1215 MHz	150			Watts
Pin	Power Input	Vcc = 50 Volts			30	Watts
Pg	Power Gain	PW = 20 μsec	7.0			dB
η_c	Collector Efficiency	DF = 5%		38		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			10:1	

BVebo	Emitter to Base Breakdown	Ie = 10 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	Ic = 50 mA	55			Volts
$\mathbf{h_{FE}}$	DC - Current Gain	I c= 50 mA, Vce = 5 V	10			
θ**jc**[2]	Thermal Resistance				0.3	ºC/W

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

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CHz TECHNOLOGY
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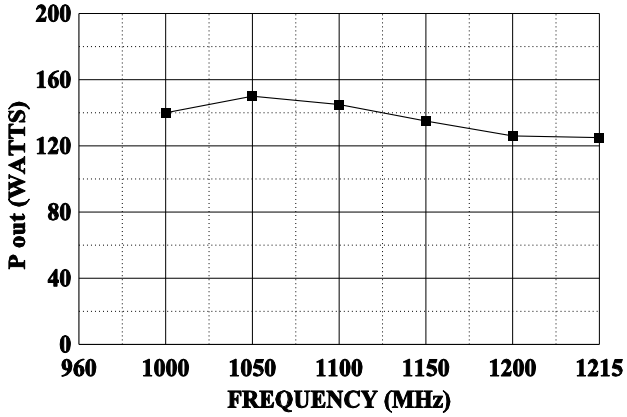
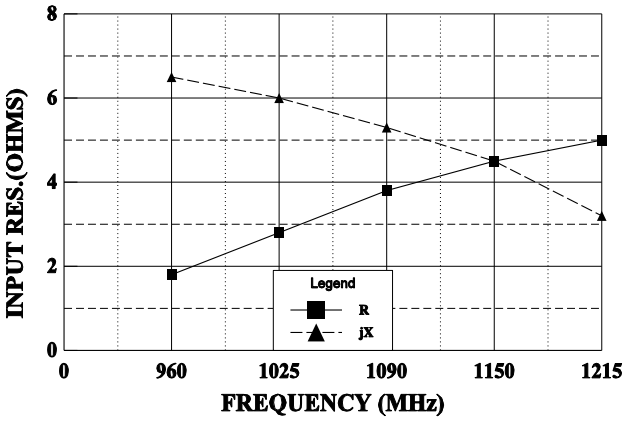
POWER OUTPUT vs FREQUENCY

Vcc=50 V, Pin=30 W Peak



SERIES INPUT IMPEDANCE vs FREQUENCY

Vcc = 50 V, Pin = 30 W



SERIES LOAD IMPEDANCE vs FREQUENCY

Vcc = 50 V, Pin = 30 W