

GENERAL DESCRIPTION

The TAN250A is a high power common base bipolar transistor. It is designed for pulsed TACAN systems and has 20µsec pulse widths and 5% duty factors. The device has gold thin-film metallization and diffused ballasting for proven highest MTTF. Surface passivation eliminates contamination and extends life. Low thermal resistance, hermetically sealed packaging reduces junction temperature, extends life and meets full military requirements.

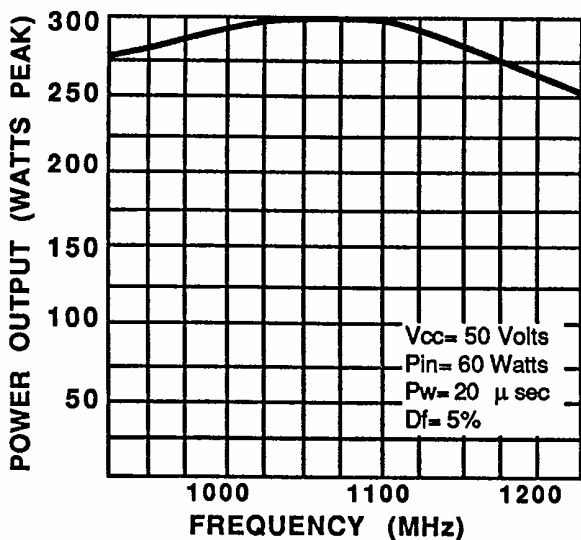
ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 575 W

Maximum Voltage and Current
 BVces Collector to Emitter Voltage 60 V
 BVebo Emitter to Base Voltage 4.0 V
 Ic Collector Current 30 A

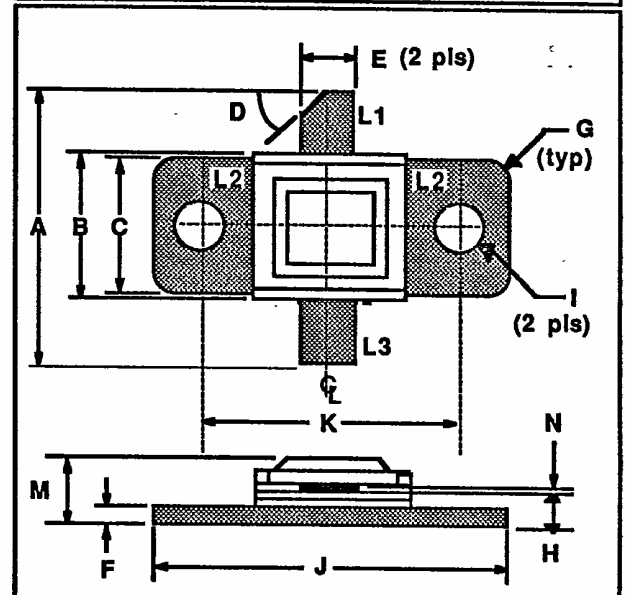
Maximum Temperatures
 Storage Temperature -65 to +200 °C
 Operating Junction Temperature +200 °C
 Lead Temperature (Soldering 8 sec. time limit) +260 °C
 ≤ 1/32" from ceramic

BROADBAND POWER OUTPUT VS FREQUENCY (TYPICAL)

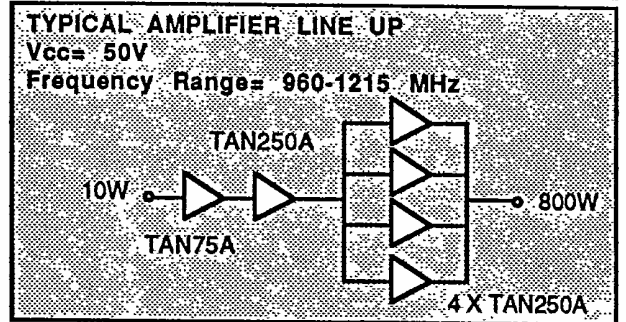


TAN 250A
 250 WATTS - 50 VOLTS
 960-1215 MHz

AVIONICS



DIM	Millimeter	TOL	Inches	TOL
L1 : c				
L2 : b				
L3 : e				
A	20.32	.76	.800	.030
B	10.16	.13	.400	.005
C	9.78	.13	.385	.005
D	45°	5°	45°	5°
E	3.81	.13	.150	.005
F	1.52	.13	.060	.005
G	1.52 R	.13	.060 R	.005
H	3.05	.13	.120	.005
I	3.30 DIA	.13	.130 DIA	.005
J	22.86	.13	.900	.005
K	16.51	.13	.650	.005
M	5.46	REF	.215	REF
N	0.13	.02	.005	.001



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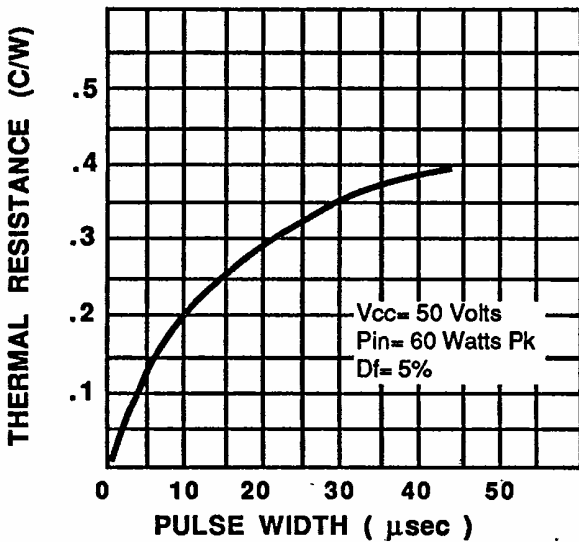
TAN 250A-2

ELECTRICAL CHARACTERISTICS¹

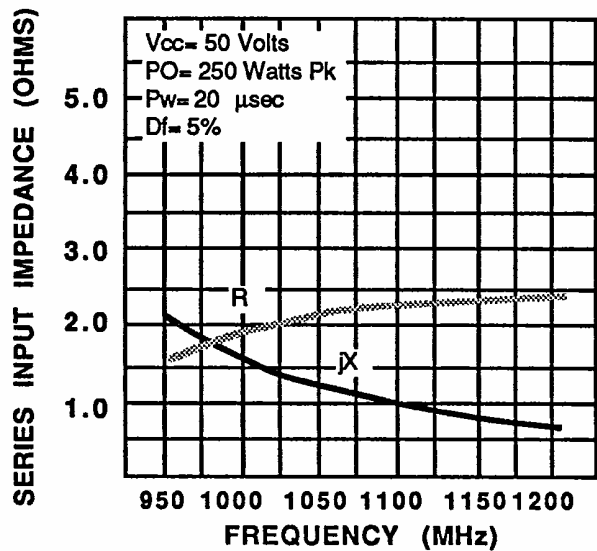
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f=960-1215 MHz V _{cc} =50 Volts Pulse Width= 20 μsec Duty Factor = 5%	250			Watts
P _{in}	Power Input				60	Watts
P _g	Power Gain				7.0	dB
η _c	Collector Efficiency				40	%
VSWR	Load Mismatch Tolerance				5:1	
B _{Vebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 20mA	4.0			Volts
B _{Vces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 25mA	60			Volts
h ⁿ _{FE}	DC-Current Gain	V _{ce} = 5V, I _c = 1A	10			

Note 1: T_c = +25°C unless otherwise specified

THERMAL RESISTANCE VS PULSE WIDTH



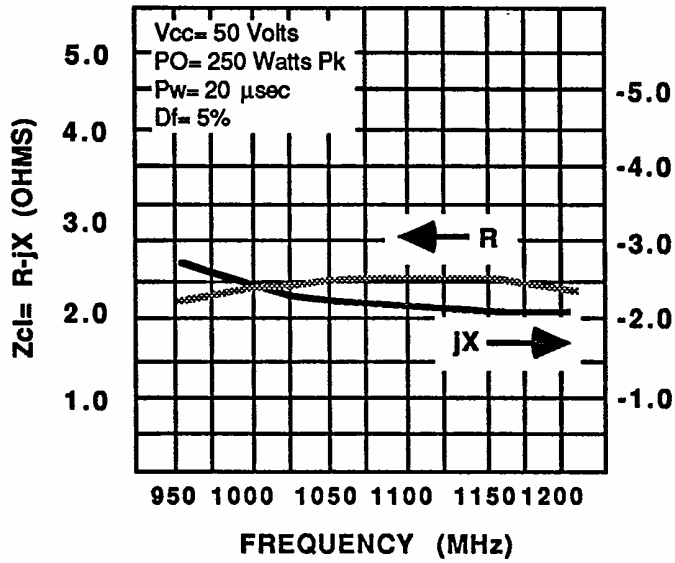
SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)



SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

TAN250A-3

SERIES LOAD IMPEDANCE VS FREQUENCY (TYPICAL)



960-1215 MHz BROADBAND TEST AMPLIFIER

