GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

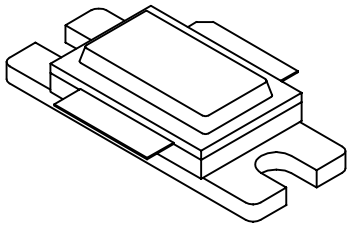
TAN 350

350 Watts, 50 Volts, Pulsed
Avionics 960 – 1215 MHz

GENERAL DESCRIPTION

The **TAN 350** 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
55ST Style 1



ABSOLUTE MAXIMUM RATINGS

Power Dissipation

Device Dissipation @25°C (P_d)	1450	W (At rated pulse condition)

Voltage and Current

Collector to Base Voltage (BV_{ces})	65	V
Emitter to Base Voltage (BV_{ebo})	2.0	V
Collector Current (I_c)	40	A

Temperatures

Storage Temperature	-65 to +200	°C
Operating Junction Temperature	+230	°C

ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Out	F = 960 – 1215 MHz	350			W
P_{in}	Power Input	V_{CC} = 50 Volts			70	W
P_g	Power Gain	PW = 10 μsec	7.0	7.5		dB
η_c	Collector Efficiency	DF = 10%	38	40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz	3:1			

FUNCTIONAL CHARACTERISTICS @ 25°C

BV_{ebo}	Emitter to Base Breakdown	Ie = 25 mA	2.0			V
BV_{ces}	Collector to Emitter Breakdown	Ic = 50 mA	65			V
h_{FE}	DC – Current Gain	Ic = 1A, Vce = 5V	10			
θjc^2	Thermal Resistance			.12		°C/W

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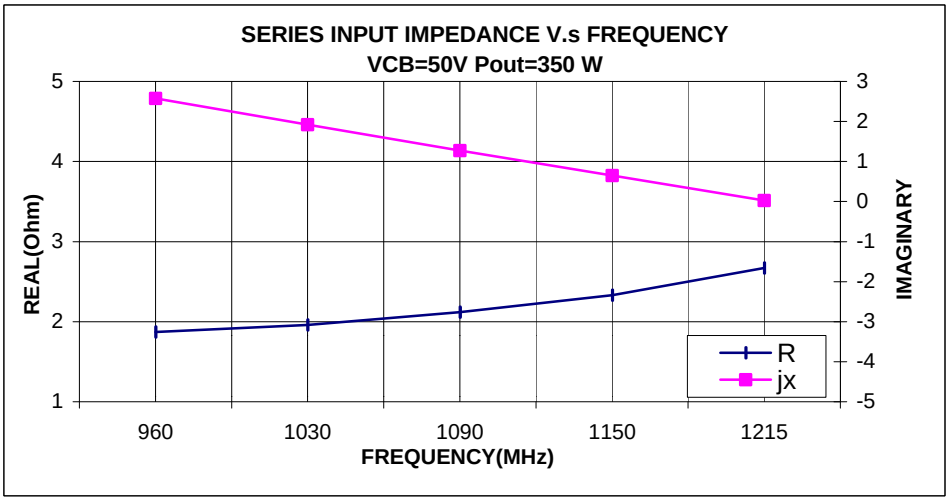
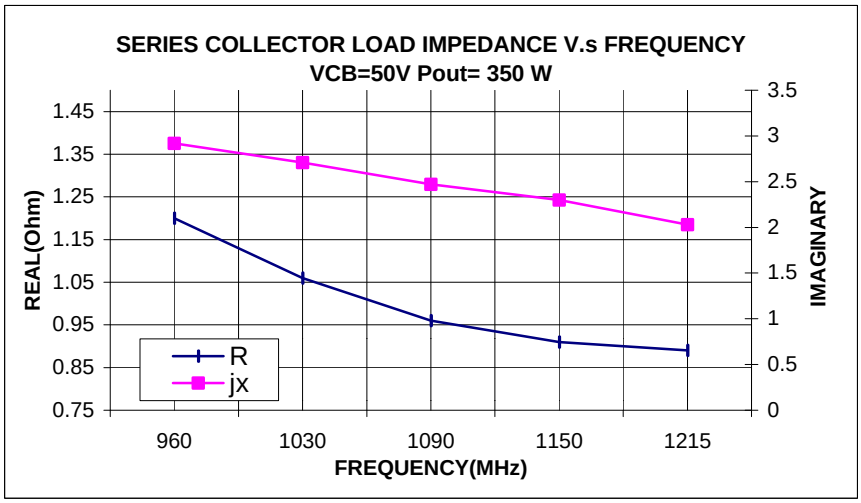
TAN350

PW 10uS, DF=10%

	Zin		ZCL	
Frequency	R	jx	R	jx
960	1.87	2.58	1.2	2.92
1030	1.96	1.92	1.06	2.71
1090	2.12	1.27	0.96	2.47
1150	2.33	0.65	0.91	2.3
1215	2.67	0.03	0.89	2.03

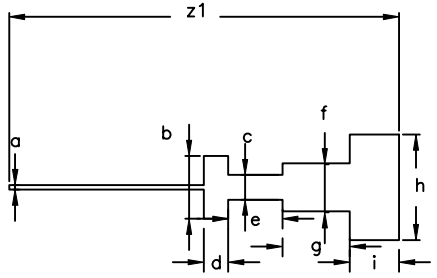


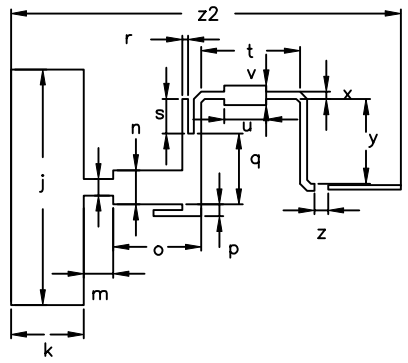


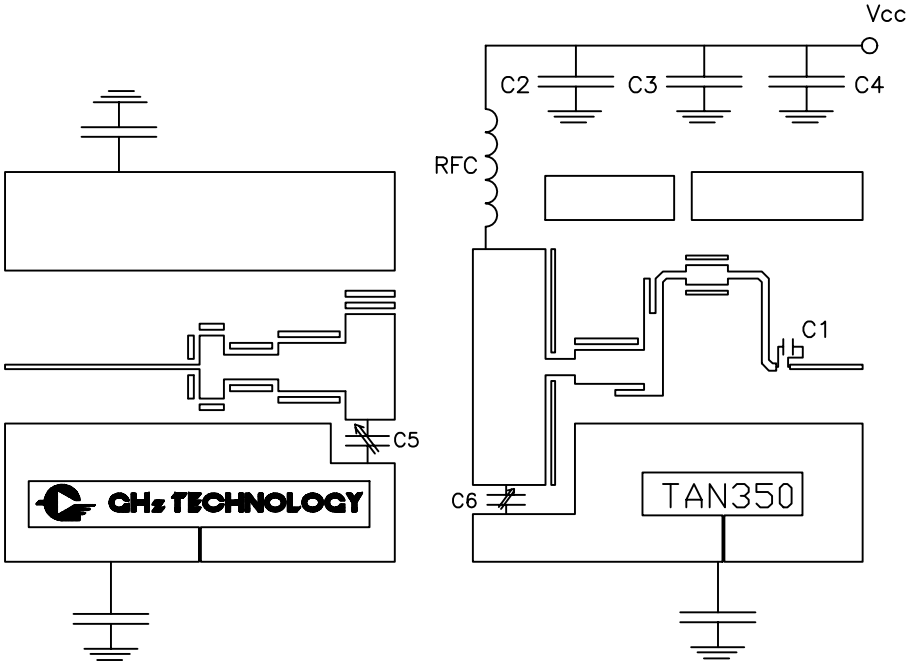
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

NOTES, UNLESS OTHERWISE SPECIFIED:

1. ONLY THE ITEM DESCRIBED ON THIS DRAWING WHEN PROCURED FROM THE "APPROVED SUPPLIER LIST", IS APPROVED FOR USE IN THE APPLICATION SPECIFIED HEREON. A SUBSTITUTE ITEM SHALL NOT BE USED WITHOUT PRIOR TESTING AND APPROVAL BY GHz.







DIM	inches	DIM	inches
a	.0233	n	.175
b	.323	o	.450
c	.127	p	.060
d	.125	q	.364
e	.278	r	.030
f	.247	s	.177
g	.345	t	.507
h	.5417	u	.215
i	.253	v	.100
j	1.210	x	.037
k	.370	y	.435
l	.084	z	.070
m	.152	z1,z2	2.000

RFC 5T #22AWG .200" Dia
C1 = C4 = 91pf ATC B
C2 = 1000uF 63V Electrolytic
C3 = 0.01uF ATC A
C5=C6= 0-3.5pf Johanson trimmer capacitors
Vcc = 50 V.

NEXT ASSY	USED ON
APPLICATION	

TOLERANCES
UNLESS OTHERWISE SPECIFIED
DECIMALS
.XX ±.01
.XXX ±.005
.XXXX ±.001
ANGLES ±5°

MATERIAL:
Duroild Material
Er = 10.2
H = 25 mils
T = 1.0 Oz.

APPROVALS SIGNATURES	DATE
ORIGINATOR	
CHECKED	
APPROVED	
APPLICATION ENG.	
PRODUCT ENG.	
MANUFACTURING	
QA	
MARKETING	
SALES	

GHz TECHNOLOGY
3000 OAKMEAD VILLAGE DRIVE
SANTA CLARA, CA 95051-0808

TAN 350

SIZE	CAGE CODE	DOC/PART NO.	REV
A	0PJR2	TAN 350	A

SCALE: N/A FILE: TAN 350 SHEET: 4 OF 5