



# TAN 350

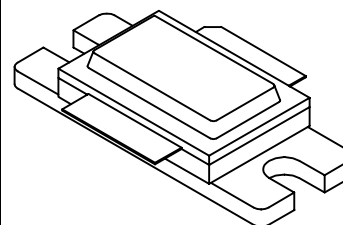
**350 Watts, 50 Volts, Pulsed**  
**Avionics 960 – 1215 MHz**

## 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 $\mu$ sec	7.0	7.5		dB
$\eta_c$	Collector Efficiency	DF = 10%	38	40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz	3:1			

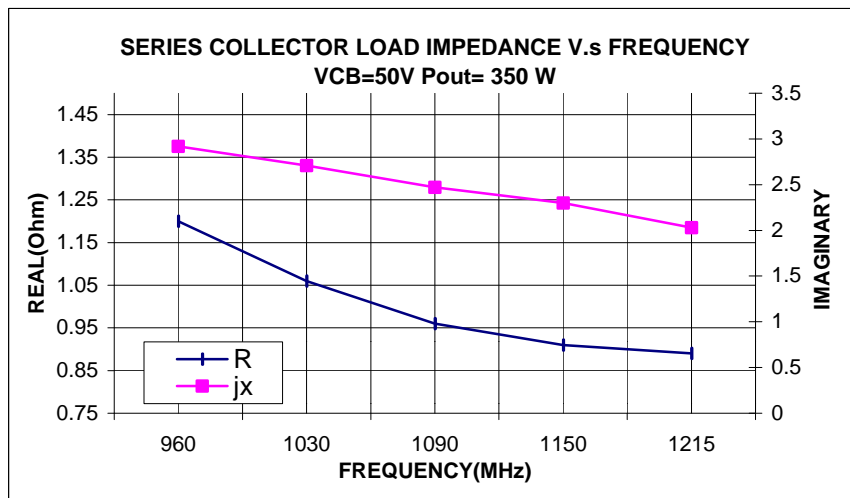
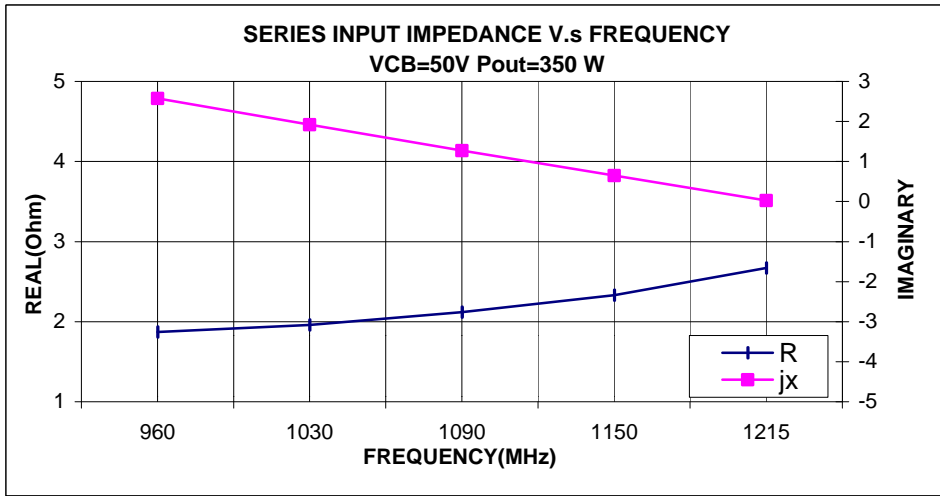
## FUNCTIONAL CHARACTERISTICS @ 25°C

$BV_{ebo}$	Emitter to Base Breakdown	$I_e = 25$ mA	2.0			V
$BV_{ces}$	Collector to Emitter Breakdown	$I_c = 50$ mA	65			V
$h_{FE}$	DC – Current Gain	$I_c = 1$ A, $V_{ce} = 5$ V	10			
$\theta_{jc}^2$	Thermal Resistance			.12		°C/W

# TAN350

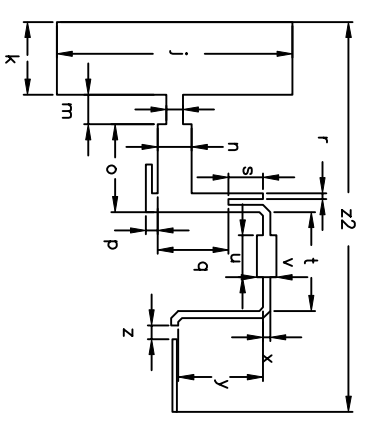
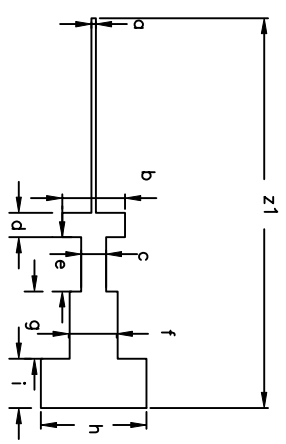
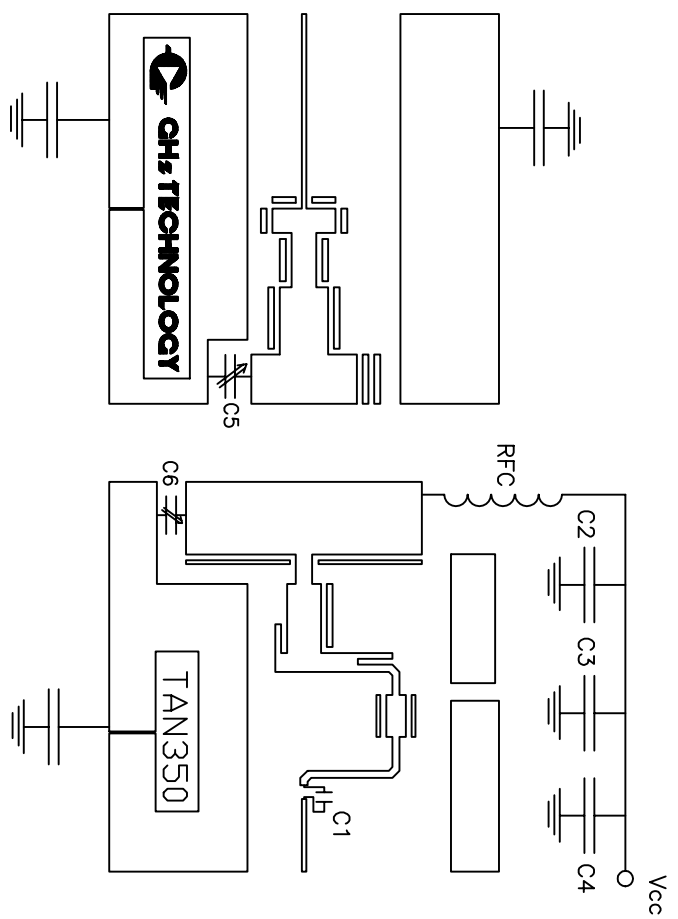
PW 10uS, DF=10%

Frequency	Zin		ZCL	
	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



NOTES, UNLESS OTHERWISE SPECIFIED:

- 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 = 91of ATC B  
 C2 = 1000uF 63V Electrolytic  
 C3 = 0.01uF ATC A  
 C5=C6= 0-3.5pf Johanson trimmer capacitors  
 Vcc = 50 V.

**TOLERANCES**  
 UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS ±.01  
 ANGLES ±.005  
 .XXX ±.001  
 .XXXX ±.001  
 .XXXX ±.001

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

THIS DRAWING CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND IS THE PROPERTY OF GHZ TECHNOLOGY INC. NO USE THEREOF SHALL BE MADE OTHER THAN AS A REFERENCE FOR PROPOSALS SUBMITTED TO GHZ TECHNOLOGY INC. FOR JOBS TO BE EXECUTED IN CONFORMANCE WITH SUCH PROPOSALS UNLESS THE EXPRESS WRITTEN CONSENT OF GHZ TECHNOLOGY INC. HAS BEEN PREVIOUSLY OBTAINED. NO PART OF THIS DRAWING SHALL BE COPIED OR DUPLICATED OR ITS CONTENTS DISCLOSED.

APPROVALS SIGNATURES		DATE	SIZE		CAGE CODE	DOC/PART NO.	TAN 350	REV
CHECKED			A	OPJR2			TAN 350	A
APPROVED								
PRODUCT ENG.								
MANUFACTURING								
QA								
MARKETING								
SALES								



3000 OAKMEAD VILLAGE DRIVE  
 SANTA CLARA, CA 95051-0808

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