



# TAN 350

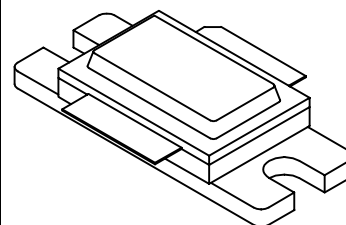
**350 Watts, 50 Volts, Pulsed**  
**Avionics 960 – 1215 MHz**

## 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			

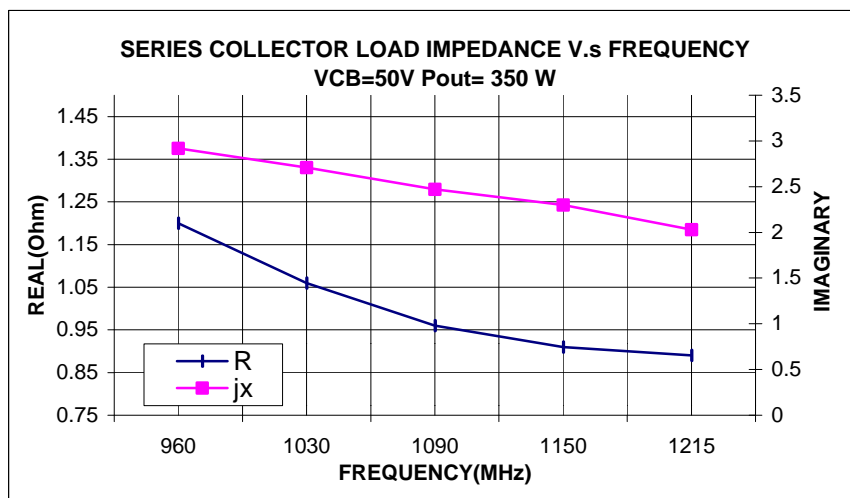
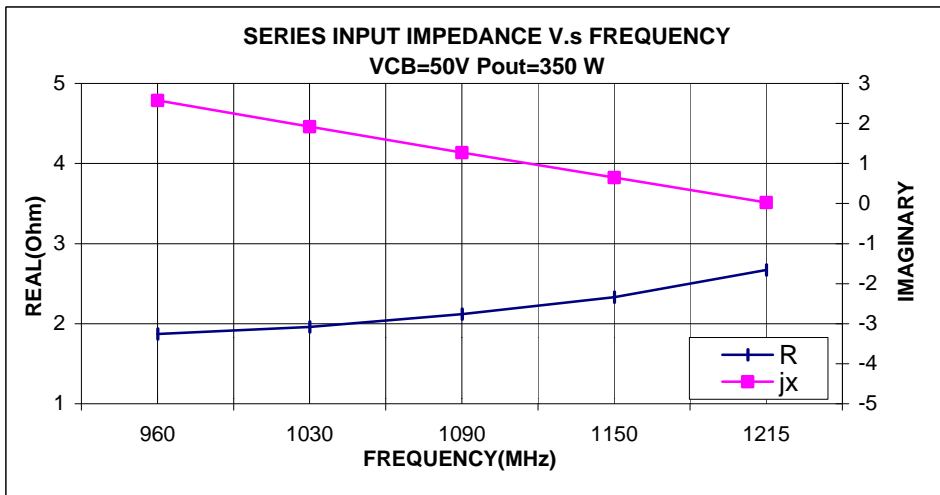
## FUNCTIONAL CHARACTERISTICS @ 25°C

$BV_{ebo}$	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

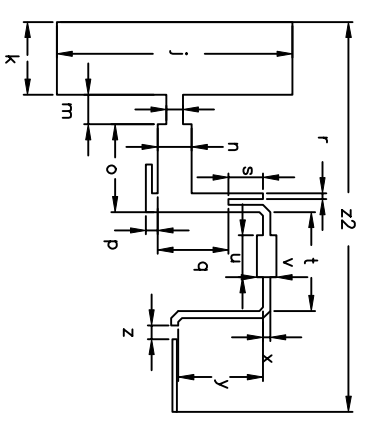
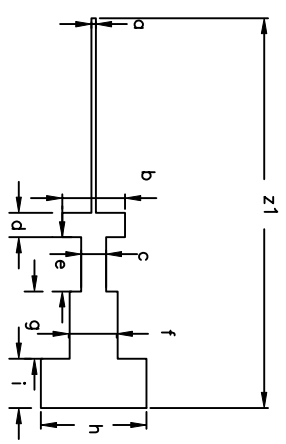
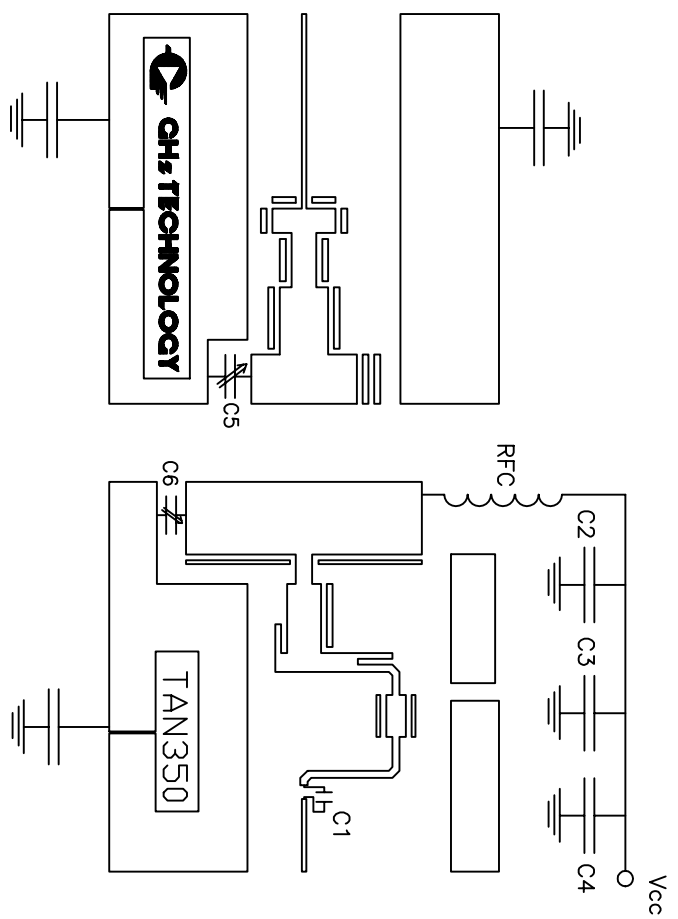
PW 10uS, DF=10%

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  
 .XXXXX ±.001

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

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3000 OAKMEAD VILLAGE DRIVE  
 SANTA CLARA, CA 95051-0808

TAN 350

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								
NEXT ASSY APPLICATION		USED ON	SCALE: N/A		FILE: TAN 350	SHEET: 4 OF 5		