



TAN 350

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

GENERAL DESCRIPTION

The **TAN350** 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 MTF. The transistor includes input and output prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.

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

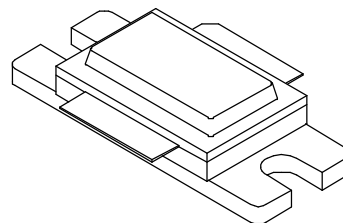
Collector Current (I_c) 40 A

Temperatures

Storage Temperature -65 to +200 °C

Operating Junction Temperature +230 °C

CASE OUTLINE 55ST Style 1



ELECTRICAL CHARACTERISTICS @ 25°C

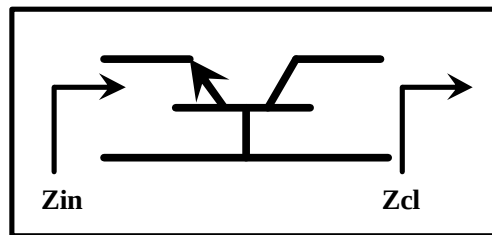
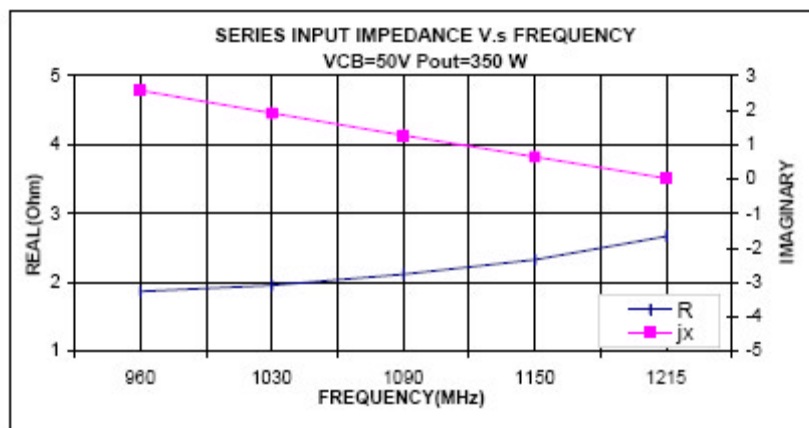
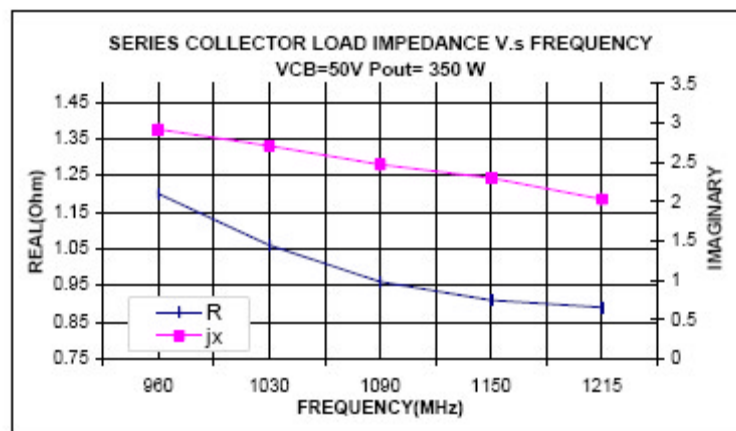
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Out	F = 960 – 1215 MHz V_{CC} = 50 Volts	350			W
P_{in}	Power Input				70	W
P_g	Power Gain	PW = 10 μ sec	7.0	7.5		dB
η_c	Collector Efficiency	DF = 10%	38	40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz	3:1			

FUNCTIONAL CHARACTERISTICS @ 25°C

BV_{ebo}	Emitter to Base Breakdown	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 = 1A, V_{ce} = 5V	10			
θ_{jc}^2	Thermal Resistance			.12		°C/W

Rev A - Sept. 2005

	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



TAN350

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 GHS.

REF. BT #224WG, 200V Dia
 C1 = C4 = 0.01uF ATC B
 C2 = 1000uF 35V Electrolytic
 C3 = 0.01uF ATC A
 C5-C7 = 0.01uF Johnson trimmer capacitors
 Vcc = 50 V.

DIM	inches	DIM	inches
a	.0233	n	.175
b	.323	o	.450
c	.127	p	.060
d	.125	q	.384
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
m	.084	z	.070
	.152	z1, z2	2.000

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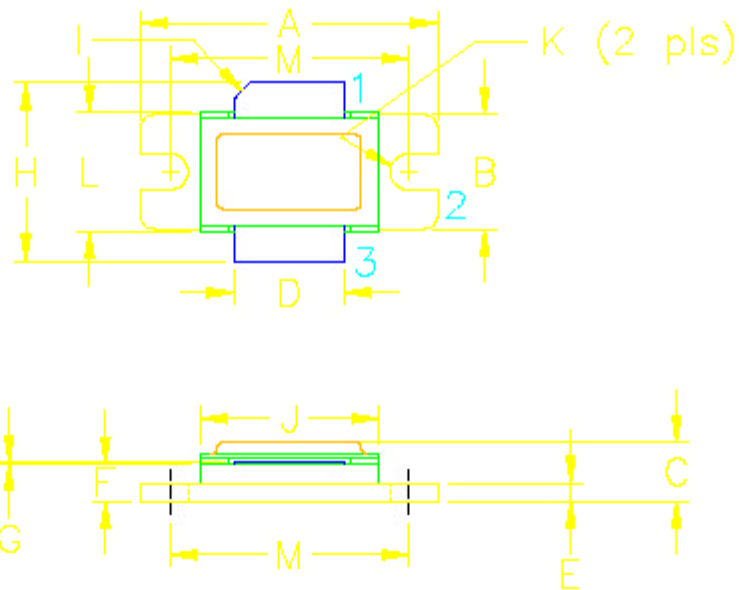
APPROVED: GHS TECHNOLOGY

350V DRIVER, VALVE DRIVE
 BROWN CLARK, TX 76001-4800

TAN 350

SIZE: A
 QPJR2
 DATE: 11/11/01
 FILE: TAN 350
 SHEET: 4 OF 5

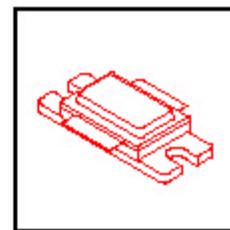
TAN350



DIM	MILLIMETER	±TOL	INCHES	±TOL
A	25.40	.25	1.000	.010
B	9.78	.25	.385	.010
C	4.00	.19	.142	.007
D	9.40	.13	.370	.005
E	1.53	.13	.060	.005
F	3.18	.13	.125	.005
G	0.08	+0.05/-0.00	.003	+0.002/-0.000
H	19.05	0.51	.750	.020
I	45°	5°	45°	5°
J	15.24	.25	.600	.010
K	3.05 DIA	.13	.120 DIA	.005
L	10.15	.13	.400	.005
M	20.32	.25	.800	.010

STYLE 1:
PIN 1 = COLLECTOR
2 = BASE
3 = EMITTER

STYLE 2:
PIN 1 = COLLECTOR
2 = EMITTER
3 = BASE



DWG NO.

55ST