

GTM**CORPORATION**ISSUED DATE :2003/12/12
REVISED DATE :2005/06/24C

G2N3904

NPN EPITAXIAL PLANAR TRANSISTOR

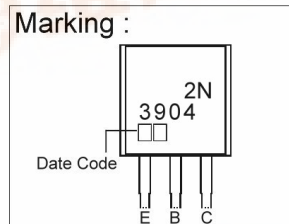
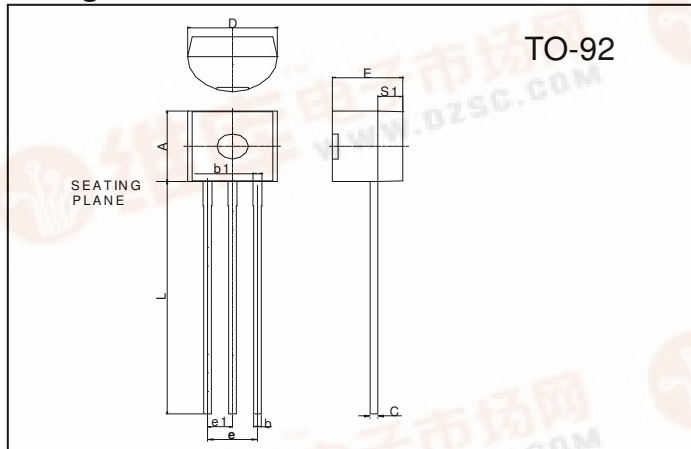
Description

The G2N3904 is designed for general purpose switching and amplifier applications.

Features

- *Pb-free package are available
- *Collector-Emitter Voltage: $V_{CEO}=40V$
- *Collect Dissipation: $P_c(\max)=625mW$
- *Complementary to G2N3906

Package Dimensions



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.45	4.7	D	4.44	4.7
S1	1.02	-	E	3.30	3.81
b	0.36	0.51	L	12.70	-
b1	0.36	0.76	e1	1.150	1.390
C	0.36	0.51	e	2.42	2.66

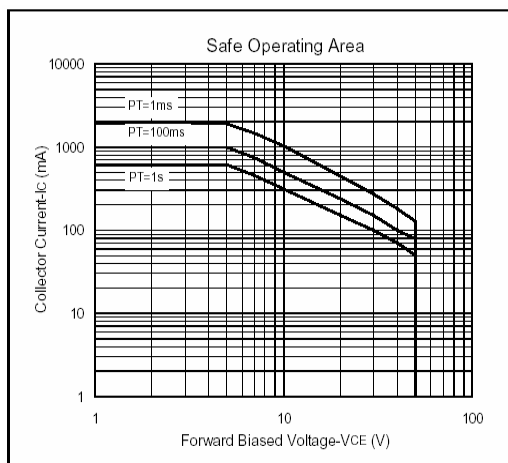
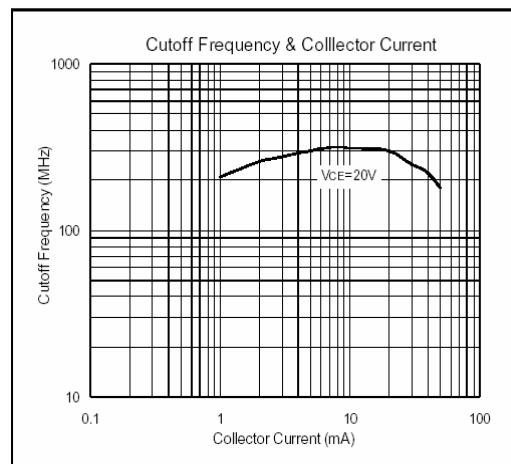
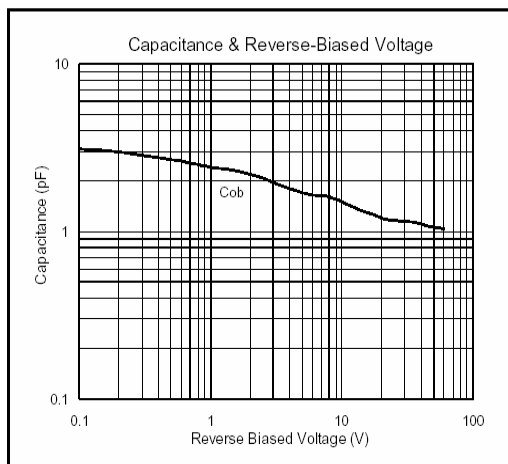
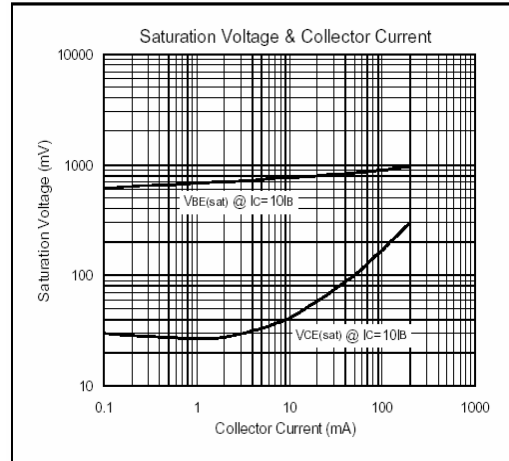
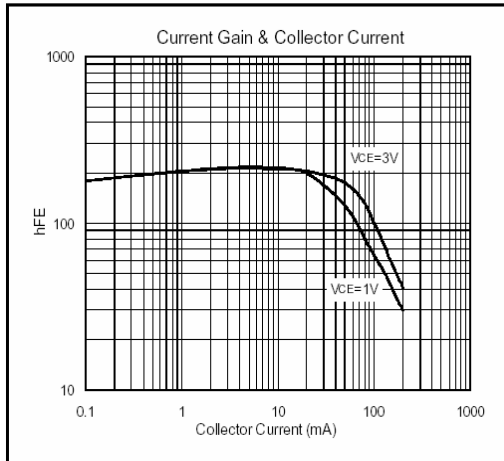
Absolute Maximum Ratings ($T_a = 25^\circ C$, unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	40	V
Emitter to Base Voltage	V_{EBO}	6	V
Collect Current(DC)	I_C	200	mA
Junction Temperature	T_j	+150	$^\circ C$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ C$
Total Power Dissipation	P_D	625	mW

Electrical Characteristics ($T_a = 25^\circ C$, unless otherwise specified)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V_{CBO}	60	-	-	V	$I_C=10\mu A, I_E=0$
V_{CEO}	40	-	-	V	$I_C=1mA, I_B=0$
V_{EBO}	6	-	-	V	$I_E=10\mu A, I_C=0$
I_{CEX}	-	-	50	nA	$V_{CE}=30V, V_{EB}=3V$
I_{EBO}	-	-	50	nA	$V_{EB}=3V$
$V_{CE(sat)1}$	-	-	200	mV	$I_C=10mA, I_B=1mA$
$V_{CE(sat)2}$	-	-	300	mV	$I_C=50mA, I_B=5mA$
$V_{BE(sat)1}$	650	-	850	mV	$I_C=10mA, I_B=1mA$
$V_{BE(sat)2}$	-	-	950	mV	$I_C=50mA, I_B=5mA$
h_{FE1}	40	-	-		$V_{CE}=1V, I_C=0.1mA$
h_{FE2}	70	-	-		$V_{CE}=1V, I_C=1mA$
h_{FE3}	100	-	300		$V_{CE}=1V, I_C=10mA$
h_{FE4}	60	-	-		$V_{CE}=1V, I_C=50mA$
h_{FE5}	30	-	-		$V_{CE}=1V, I_C=100mA$
f_T	300	-	-	MHz	$V_{CE}=20V, I_E=-10mA, f=100MHz$
C_{ob}	-	-	4	pF	$V_{CB}=10V, f=100KHz$
C_{ib}	-	-	8	pF	$V_{EB}=0.5V, f=100KHz$
t_d	-	-	35	ns	$V_{CC}=3V, V_{BE(OFF)}=0.5V, I_C=10mA, I_{B1}=1mA$
t_{sig}	-	-	35	ns	$V_{CC}=3V, V_{BE(OFF)}=0.5V, I_C=10mA, I_{B1}=1mA$
t_f	-	-	200	ns	$V_{CC}=3V, I_C=10mA, I_{B1}=I_{B2}=1mA$
t_r	-	-	50	ns	$V_{CC}=3V, I_C=10mA, I_{B1}=I_{B2}=1mA$

Characteristics Curve



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