

# G2N3904

## NPN EPITAXIAL PLANAR TRANSISTOR

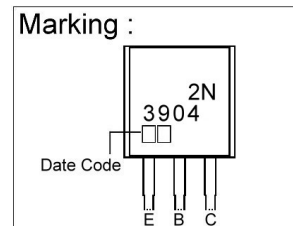
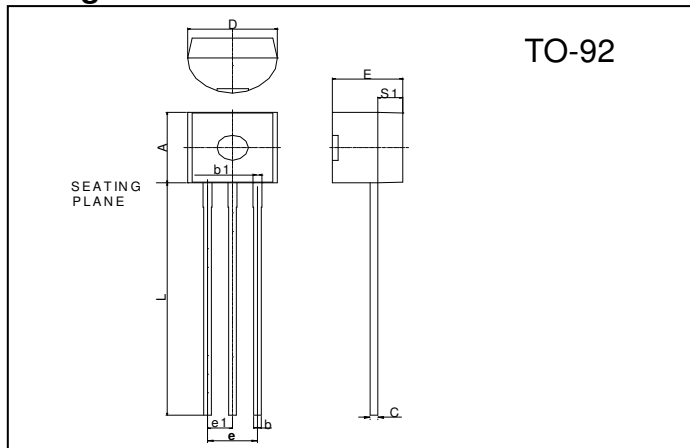
### Description

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

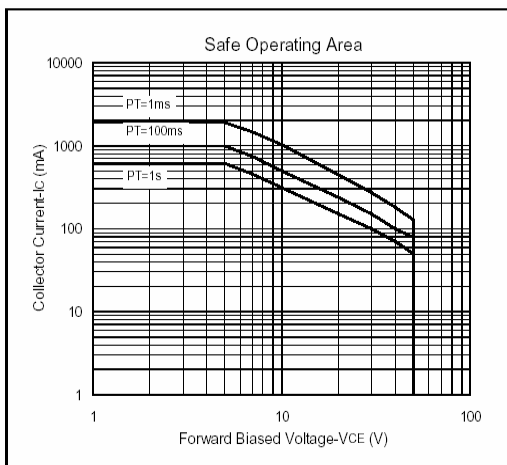
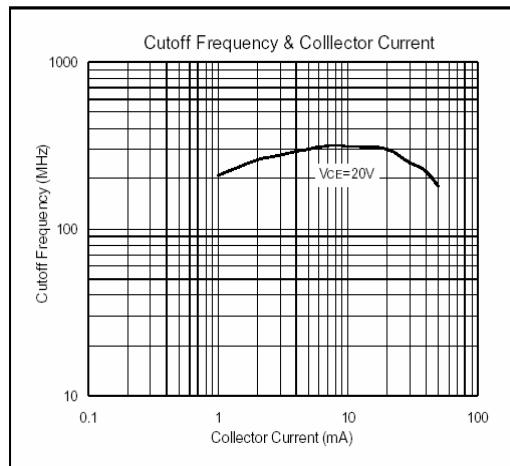
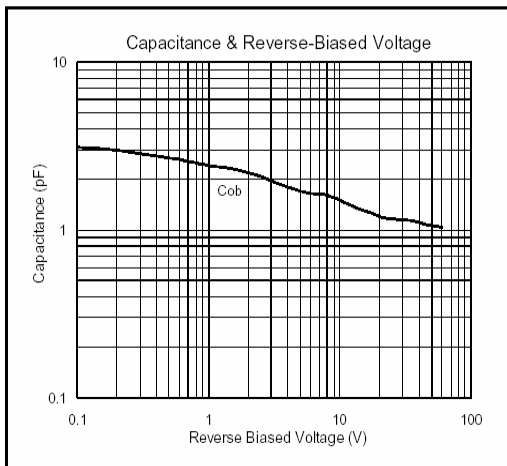
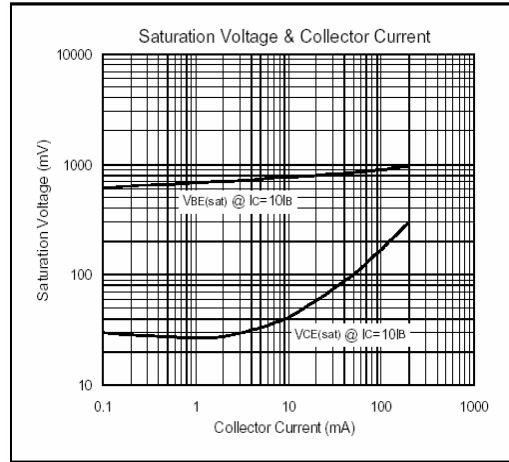
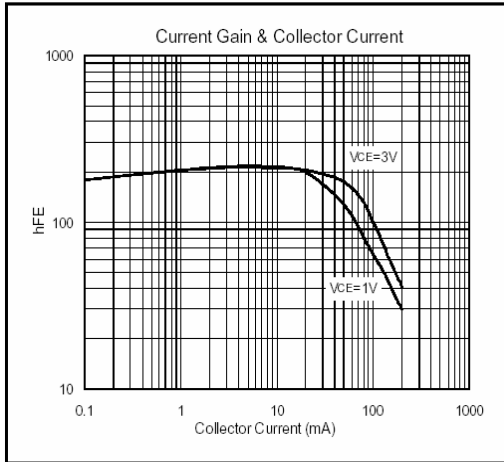
### Absolute Maximum Ratings ( $T_a = 25^\circ C$ , unless otherwise specified)

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	PD	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	-	-		$V_{CE}=1V, I_C=100mA$
fT	300	-	-	MHz	$V_{CE}=20V, I_E=-10mA, f=100MHz$
Cob	-	-	4	pF	$V_{CB}=10V, f=100KHz$
Cib	-	-	8	pF	$V_{EB}=0.5V, f=100KHz$
td	-	-	35	ns	$V_{CC}=3V, V_{BE(OFF)}=0.5V, I_C=10mA, I_{B1}=1mA$
tr	-	-	35	ns	$V_{CC}=3V, V_{BE(OFF)}=0.5V, I_C=10mA, I_{B1}=1mA$
tstg	-	-	200	ns	$V_{CC}=3V, I_C=10mA, I_{B1}=-I_{B2}=1mA$
tf	-	-	50	ns	$V_{CC}=3V, I_C=10mA, I_{B1}=-I_{B2}=1mA$

## Characteristics Curve



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