

GMBT3904

NPN EPITAXIAL PLANAR TRANSISTOR

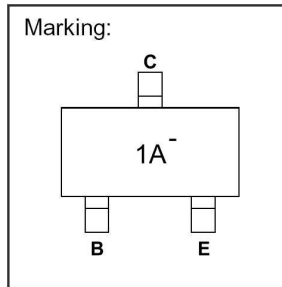
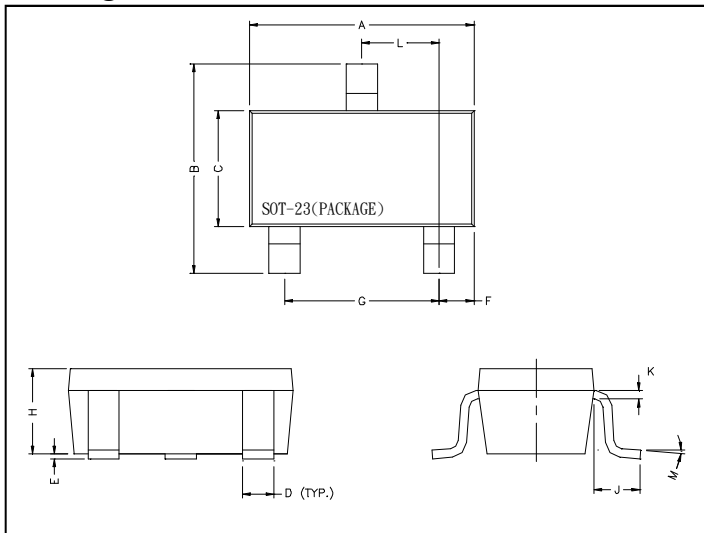
Description

The GMBT3904 is designed for general purpose switching and amplifier applications.

Features

- *Pb-free package are available
- *Collector-emitter voltage 40V
- *Complementary to GMBT3906

Package Dimensions



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	1.90	REF.
B	2.40	2.80	H	1.00	1.30
C	1.40	1.60	K	0.10	0.20
D	0.35	0.50	J	0.40	-
E	0	0.10	L	0.85	1.15
F	0.45	0.55	M	0°	10°

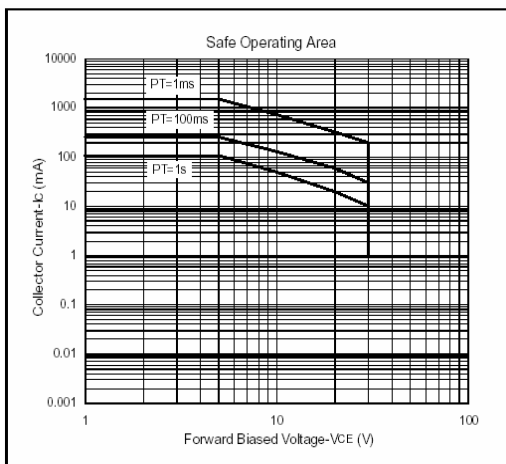
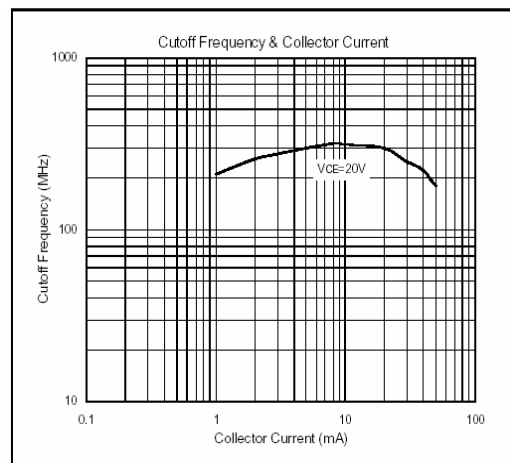
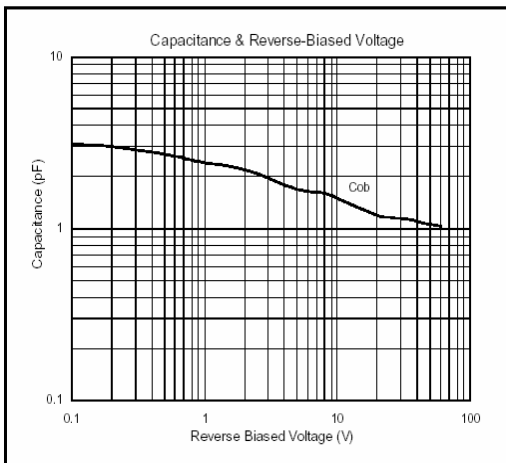
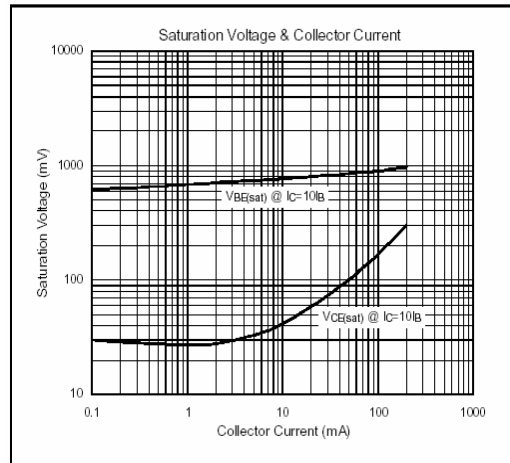
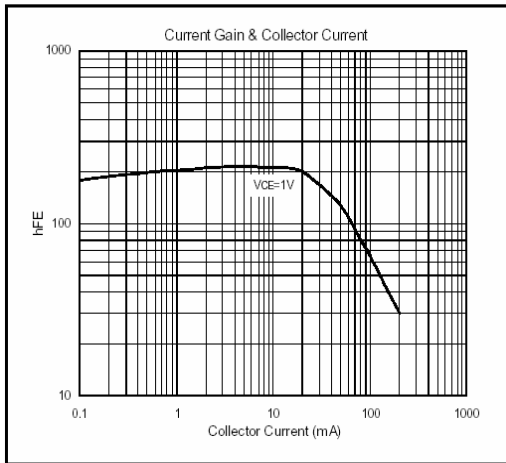
Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Ratings	Unit
Junction Temperature	Tj	+150	°C
Storage Temperature	Tstg	-65 ~ +150	°C
Collector to Base Voltage	VCBO	60	V
Collector to Emitter Voltage	VCEO	40	V
Emitter to Base Voltage	VEBO	6	V
Collector Current	IC	200	mA
Total Power Dissipation	PD	350	mW

Characteristics at Ta = 25°C

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	60	-	-	V	IC=10uA, IE=0
BVCEO	40	-	-	V	IC=1mA, IB=0
BVEBO	6	-	-	V	IE=10uA, IC=0
ICEX	-	-	50	nA	VCE=30V, VEB=3V
IEBO	-	-	50	nA	VEB=3V
VCE(sat)1	-	-	200	mV	IC=10mA, IB=1mA
VCE(sat)2	-	-	300	mV	IC=50mA, IB=5mA
VBE(sat)1	650	-	850	mV	IC=10mA, IB=1mA
VBE(sat)2	-	-	950	mV	IC=50mA, IB=5mA
hFE1	40	-	-		VCE=1V, IC=0.1mA
hFE2	70	-	-		VCE=1V, IC=1mA
hFE3	100	-	300		VCE=1V, IC=10mA
hFE4	60	-	-		VCE=1V, IC=50mA
hFE5	30	-	-		VCE=1V, IC=100mA
fT	300	-	-	MHz	VCE=20V, IE=-10mA, f=100MHz
Cob	-	-	4	pF	VCB=10V, f=100KHz
Cib	-	-	8	pF	VEB=0.5V, f=100KHz
td	-	-	35	ns	VCC=3V, VBE(OFF)=0.5V, IC=10mA, IB1=1mA
tr	-	-	35	ns	VCC=3V, VBE(OFF)=0.5V, IC=10mA, IB1=1mA
tstg	-	-	200	ns	VCC=3V, IC=10mA, IB1=-IB2=1mA
tf	-	-	50	ns	VCC=3V, IC=10mA, IB1=-IB2=1mA

Characteristics Curve



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