

GMBTA13

NPN EPITAXIAL SILICON TRANSISTOR

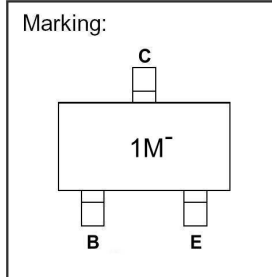
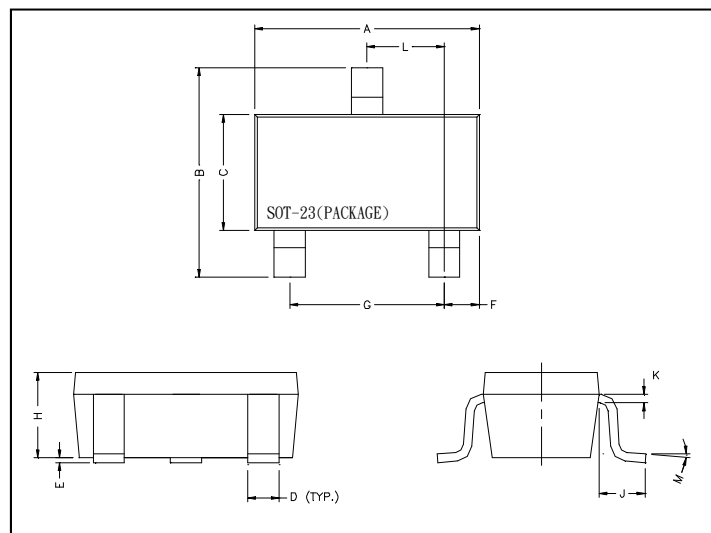
Description

The GMBTA13 is designed for Darlington Amplifier Transistor.

Features

- *High D.C. Current Gain
- *Collector-Emitter Voltage $V_{CES}=30V$

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 $T_a = 25^{\circ}C$

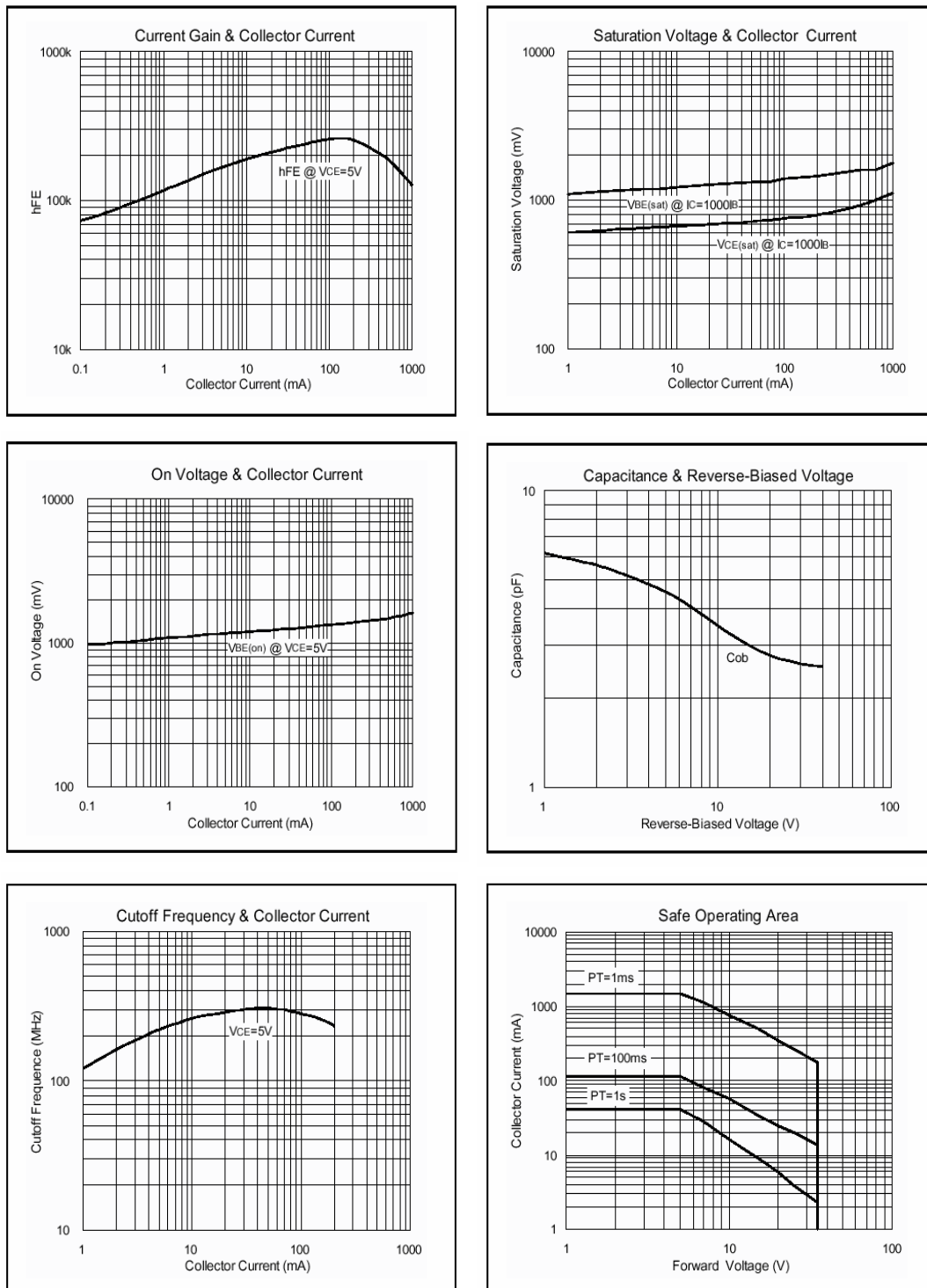
Parameter	Symbol	Ratings	Unit
Junction Temperature	T_j	+150	$^{\circ}C$
Storage Temperature	T_{stg}	-55 ~ +150	$^{\circ}C$
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CES}	30	V
Emitter to Base Voltage	V_{EBO}	10	V
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}C/W$
Thermal Resistance Junction to Case	$R_{\theta JC}$	170	$^{\circ}C/W$
Collector Current	I_C	500	mA
Total Power Dissipation	P_D	225	mW

Electrical Characteristics ($T_a = 25^{\circ}C$, unless otherwise noted)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V_{CBO}	30	-	-	V	$I_C=100\mu A, I_E=0$
V_{CES}	30	-	-	V	$I_C=100\mu A, V_{BE}=0$
V_{EBO}	10	-	-	V	$I_E=10\mu A, I_C=0$
I_{CBO}	-	-	100	nA	$V_{CB}=30V, I_E=0$
I_{EBO}	-	-	100	nA	$V_{EB}=10V, I_C=0$
* $V_{CE(sat)}$	-	-	1.5	V	$I_C=100mA, I_B=0.1mA$
* $V_{BE(on)}$	-	-	2.0	V	$V_{CE}=5V, I_C=100mA$
* h_{FE1}	5k	-	-		$V_{CE}=5V, I_C=10mA$
* h_{FE2}	10k	-	-		$V_{CE}=5V, I_C=100mA$
f_T	125	-	-	MHz	$V_{CE}=5V, I_C=10mA, f=100MHz$
C_{ob}	-	-	6	pF	$V_{CB}=10V, I_E=0, f=1MHz$

Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

Characteristics Curve



Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of GTM.
- GTM reserves the right to make changes to its products without notice.
- GTM semiconductor products are not warranted to be suitable for use in life-support Applications, or systems.
- GTM assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

Head Office And Factory:

- **Taiwan:** No. 17-1 Tatung Rd. Fu Kou Hsin-Chu Industrial Park, Hsin-Chu, Taiwan, R. O. C.
TEL : 886-3-597-7061 FAX : 886-3-597-9220, 597-0785
- **China:** (201203) No.255, Jang-Jiang Tsai-Lueng RD. , Pu-Dung-Hsin District, Shang-Hai City, China
TEL : 86-21-5895-7671 ~ 4 FAX : 86-21-38950165