

GTM CORPORATION

ISSUED DATE :2005/09/28
REVISED DATE :2005/12/09B

GL158

NPN SILICON PLANAR HIGH CURRENT TRANSISTOR

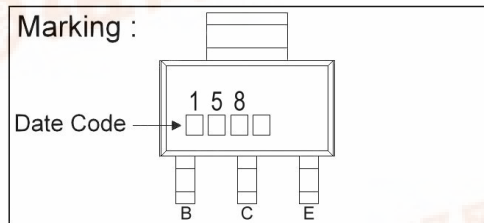
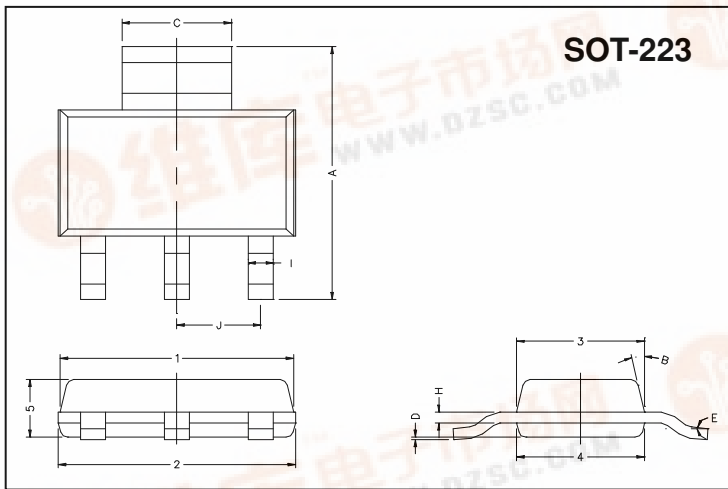
Description

The GL158 is designed for general purpose switching and amplifier applications.

Features

- 6 Amps continuous current, up to 20Amps peak current
- Excellent gain characteristic specified up to 10Amps
- Very low saturation voltages

Package Dimensions



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.70	7.30	B	13° TYP.	
C	2.90	3.10	J	2.30 REF.	
D	0.02	0.10	1	6.30	6.70
E	0°	10°	2	6.30	6.70
I	0.60	0.80	3	3.30	3.70
H	0.25	0.35	4	3.30	3.70
			5	1.40	1.80

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Ratings	Unit
Junction Temperature	Tj	+150	°C
Storage Temperature	Tstg	-55~+150	°C
Collector to Base Voltage	VCBO	150	V
Collector to Emitter Voltage	VCEO	60	V
Emitter to Base Voltage	VEBO	6	V
Collector Current (DC)	Ic	6	A
Collector Current (Pulse)	Ic	20	A
Total Power Dissipation	PD	3	W

*The power which can be dissipated assuming the device is mounted in a typical manner on a P.C.B. with copper equal to 4 square inch minimum.

Electrical Characteristics (Ta = 25°C, unless otherwise stated)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	150	-	-	V	Ic=100uA, IE=0
*BVCEO	60	-	-	V	Ic=10mA, IB=0
BVEBO	6	-	-	V	IE=100uA, Ic=0
ICBO	-	-	50	nA	VCB=120V, IE=0
ICES	-	-	50	nA	VCE=60V
IEBO	-	-	10	nA	VEB=6V, Ic=0
*VCE(sat)1	-	-	50	mV	Ic=100mA, IB=5mA
*VCE(sat)2	-	-	100	mV	Ic=1A, IB=50mA
*VCE(sat)3	-	-	170	mV	Ic=2A, IB=50mA
*VCE(sat)4	-	-	375	mV	Ic=6A, IB=300mA
*VBE(sat)	-	-	1.2	V	Ic=6A, IB=300mA
*VBE(on)	-	-	1.15	V	VCE=1V, Ic=6A
*hFE1	100	-	-		VCE=1V, Ic=10mA
*hFE2	100	200	300		VCE=1V, Ic=2A
*hFE3	75	-	-		VCE=1V, Ic=5A
*hFE4	25	-	-		VCE=1V, Ic=10A
fT	-	130	-	MHz	VCE=10V, Ic=100mA, f=50MHz

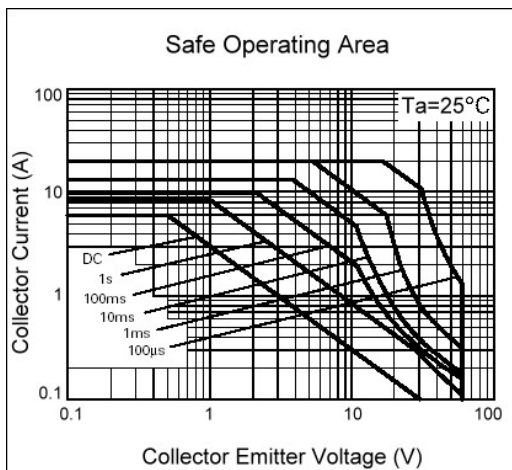
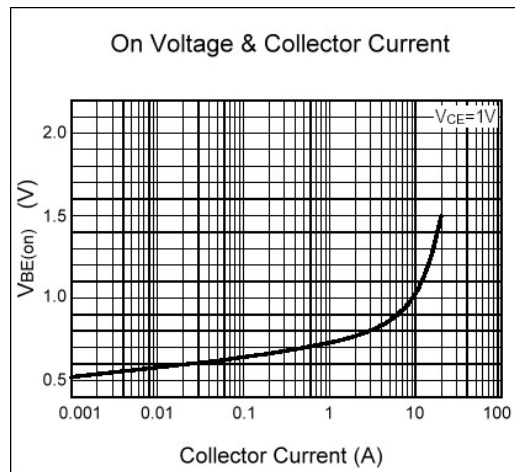
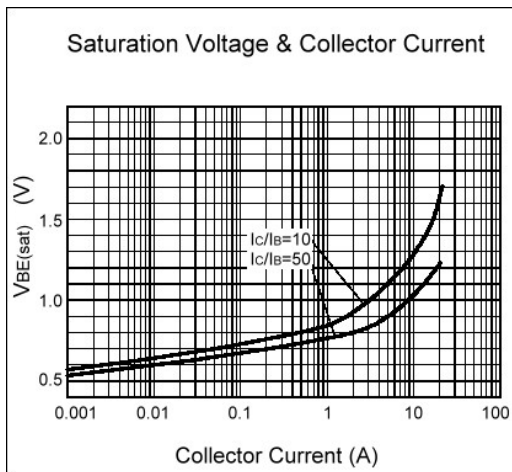
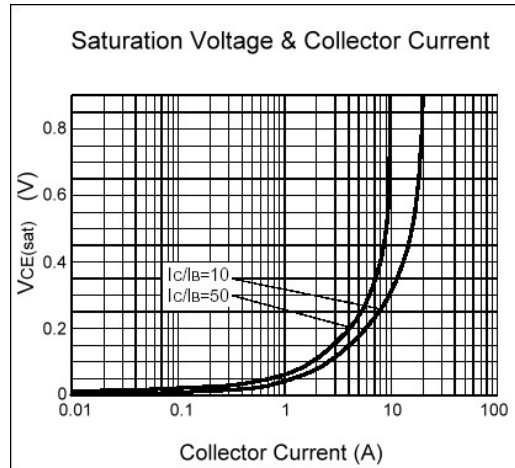
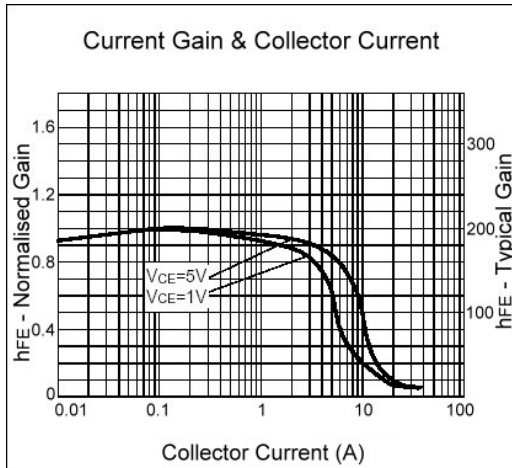


Cob	-	45	-	pF	V _{CB} =10V, I _E =0, f=1MHz
ton	-	45	-	ns	V _{CC} =10V, I _C =1A, I _{B1} =I _{B2} =100mA
toff	-	1100	-		

*Measured under pulse condition. Pulse width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Spice parameter data is available upon request for this device.

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