

GJSD1803

NPN EPITAXIAL PLANAR SILICON TRANSISTOR

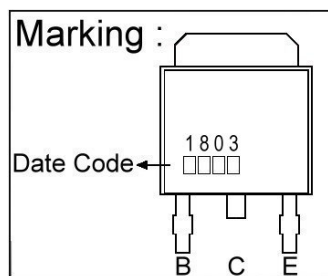
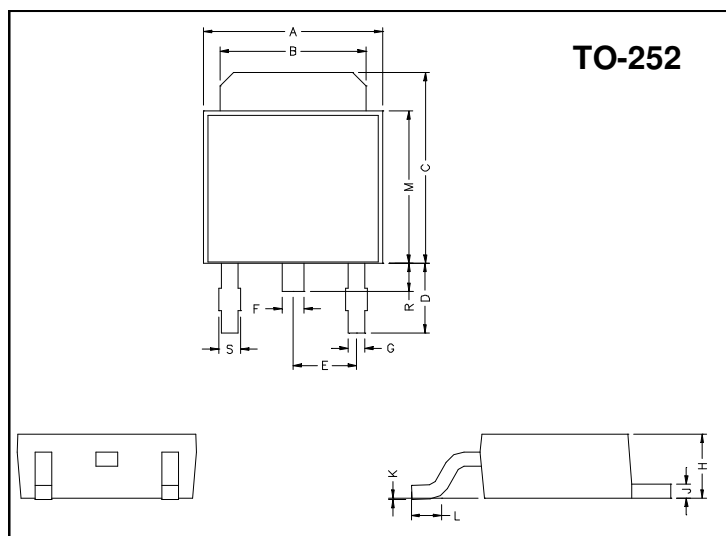
Description

The GJSD1803 applies to relay drivers, high-speed inverters, converters, and other general high-current switching applications.

Features

- *Low collector-to-emitter saturation voltage.
- *High current and high f_T
- *Excellent linearity of h_{FE}
- *Fast switching time

Package Dimensions



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.40	6.80	G	0.50	0.70
B	5.20	5.50	H	2.20	2.40
C	6.80	7.20	J	0.45	0.55
D	2.40	3.00	K	0	0.15
E	2.30 REF.		L	0.90	1.50
F	0.70	0.90	M	5.40	5.80
S	0.60	0.90	R	0.80	1.20

Absolute Maximum Ratings (Ta = 25°C, unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Junction Temperature	Tj	+150	°C
Storage Temperature	Tstg	-55 ~ +150	°C
Collector to Base Voltage	V _{CB0}	60	V
Collector to Emitter Voltage	V _{CE0}	50	V
Emitter to Base Voltage	V _{EB0}	6	V
Collector Current(DC)	I _C	5	A
Collector Current(Pulse)	I _{CP}	8	A
Collector Dissipation	P _D	1	W
	T _c =25°C	20	W

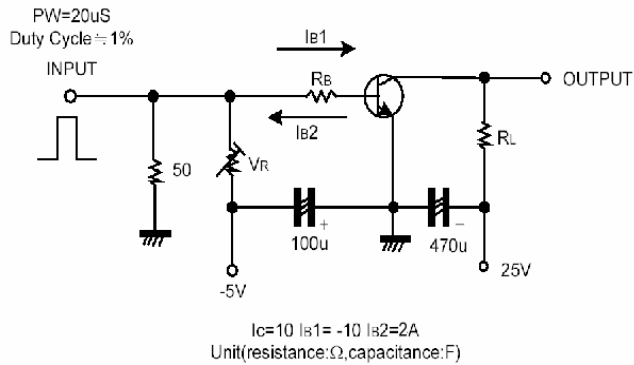
Electrical Characteristics (Ta = 25°C unless otherwise specified)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V(BR)CBO	60	-	-	V	I _C =10uA, I _E =0
V(BR)CEO	50	-	-	V	I _C =1mA, R _{BE} =∞
V(BR)EBO	6	-	-	V	I _E =10uA, I _C =0
I _{CBO}	-	-	1	uA	V _{CB} =40V, I _E =0
I _{EBO}	-	-	1	uA	V _{EB} =4V, I _C =0
V _{CE(sat)}	-	0.22	0.4	V	I _C =3A, I _B =0.15A
V _{BE(sat)}	-	0.95	1.3	V	I _C =3A, I _B =0.15A
h _{FE1}	70	-	400		V _{CE} =2V, I _C =0.5A
h _{FE2}	35	-	-		V _{CE} =2V, I _C =4A
f _T	-	180	-	MHZ	V _{CE} =5V, I _C =1A
t _{on}	-	50	-	ns	See test circuit
t _{stg}	-	500	-	ns	See test circuit
t _f	-	20	-	ns	See test circuit
C _{ob}	-	40	-	pF	V _{CB} =10V, f=1MHZ

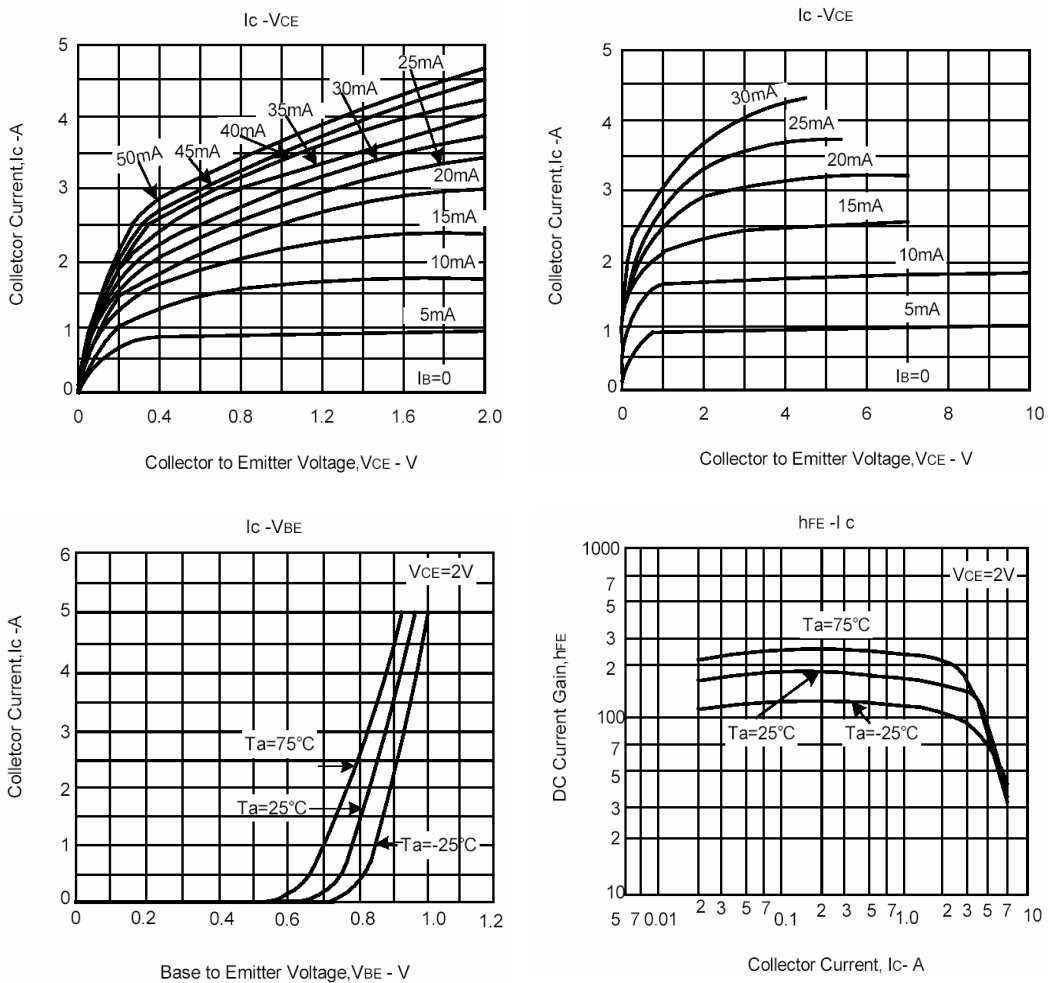
Classification Of hFE1

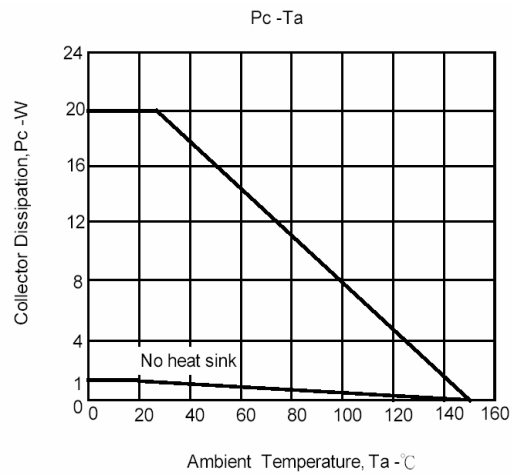
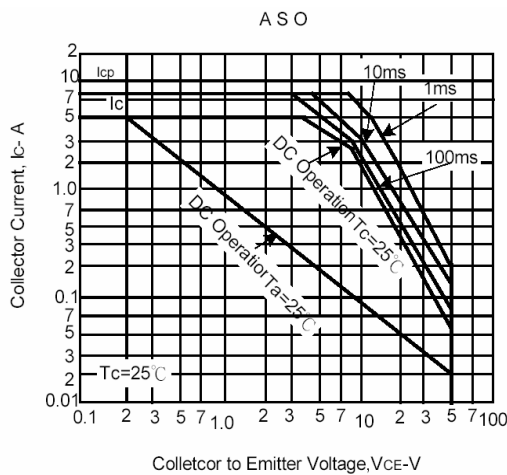
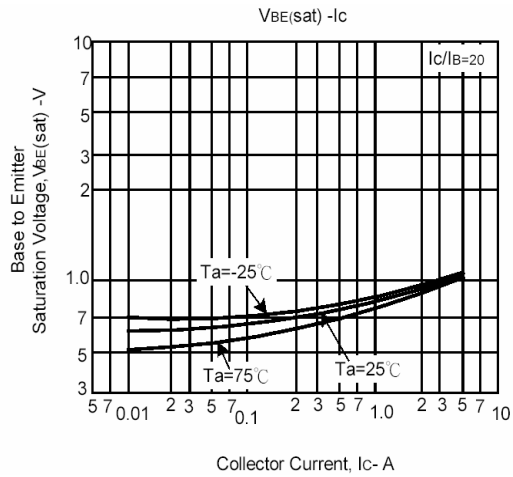
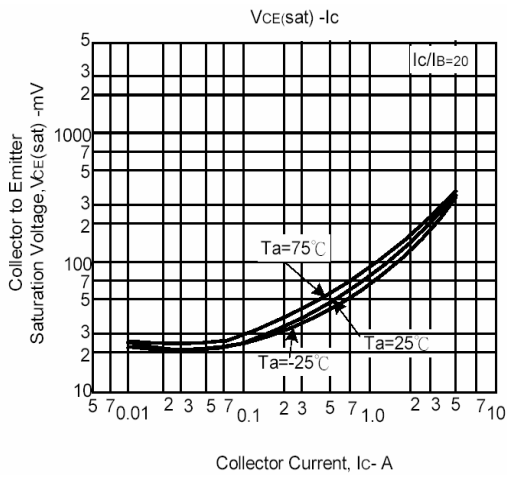
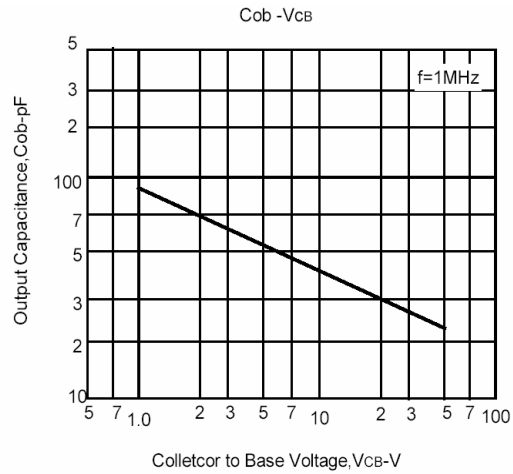
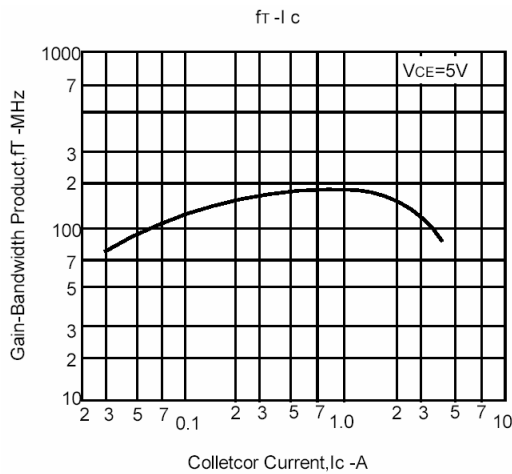
Rank	Q	R	S	T
Range	70 ~ 140	100 ~ 200	140 ~ 280	200 ~ 400

Switching Time Test Circuit



Characteristics Curve





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