GI5706

NPN EPITAXIAL PLANAR SILICON TRANSISTOR

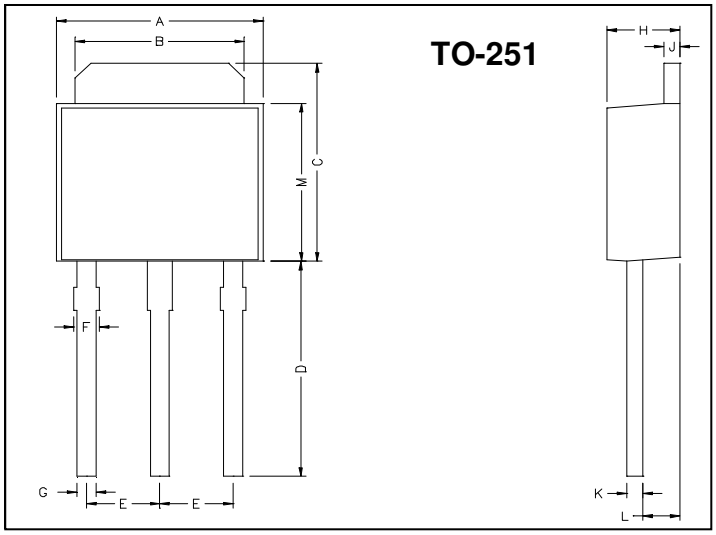
Description

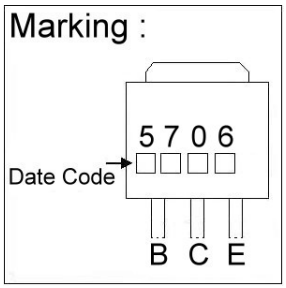
The GI5706 is designed high current switching applications.

Features

*Large current capacitance
*Low collector-to-emitter saturation voltage
*High-speed switching
*High allowable power dissipation

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	7.20	7.80	K	0.45	0.60
E	2.30 REF.		L	0.90	1.50
F	0.60	0.90	M	5.40	5.80

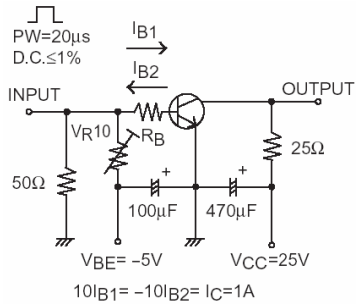
Absolute Maximum Ratings (Ta = 25℃,unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CES}	80	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current	I_C	5	A
Collector Current(Pulse)	I_{CP}	7.5	A
Base Current	I_B	1.2	A
Junction Temperature	Tj	+150	℃
Storage Temperature	T_{STG}	-55 ~ +150	℃
Total Power Dissipation	P_D	0.8	W
	$P_D(T_C=25℃)$	15	W

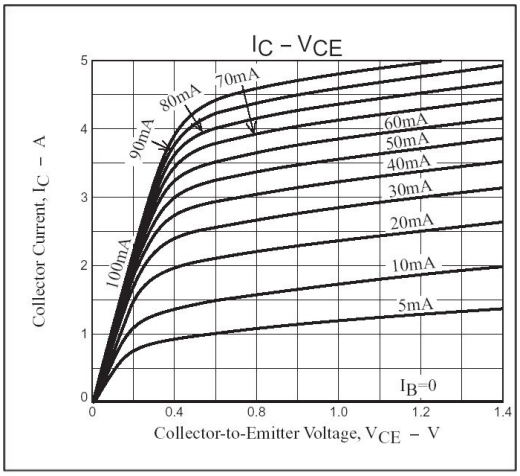
Electrical Characteristics (Rating at Ta=25℃)

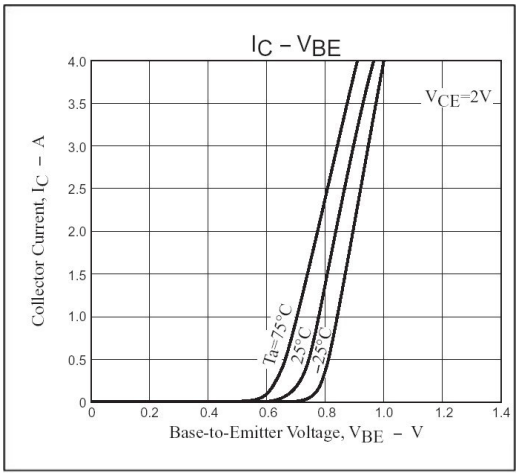
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	80	-	-	V	I_C=10uA, I_E=0
BV_{CES}	80	-	-	V	I_C=100uA, R_{BE}=0
BV_{CEO}	50	-	-	V	I_C=1mA, R_{BE}=∞
BV_{EBO}	6	-	-	V	I_E=10uA, I_C=0
I_{CBO}	-	-	1	uA	V_{CB}=40V, I_E=0
I_{EBO}	-	-	1	uA	V_{EB}=4V, I_C=0
*$V_{CE(sat)1}$	-	-	135	mV	I_C=1A, I_B=50mA
*$V_{CE(sat)2}$	-	-	240	mV	I_C=2A, I_B=100mA
*$V_{BE(sat)}$	-	-	1.2	V	I_C=2A, I_B=100mA
*h_{FE}	200	-	560		V_{CE}=2V, I_C=500mA
fT	-	400	-	MHz	V_{CE}=10V, I_C=500mA
Cob	-	15	-	pF	V_{CB}=10V, f=1MHz
ton (Turn-On Time)	-	35	-	ns	See specified test circuit.
tstg (Storage Time)	-	300	-	ns	See specified test circuit.
tf (Fall Time)	-	20	-	ns	See specified test circuit.

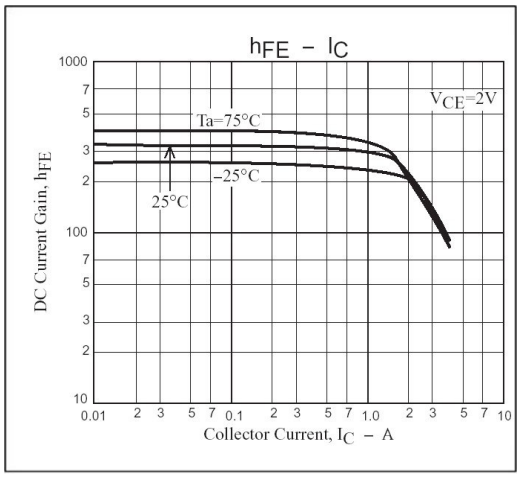
Switching Time Test Circuit

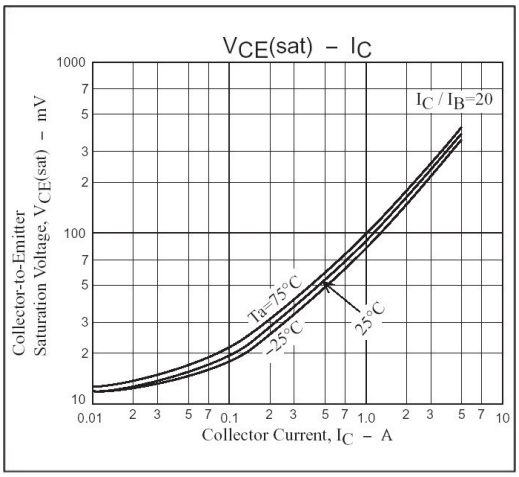


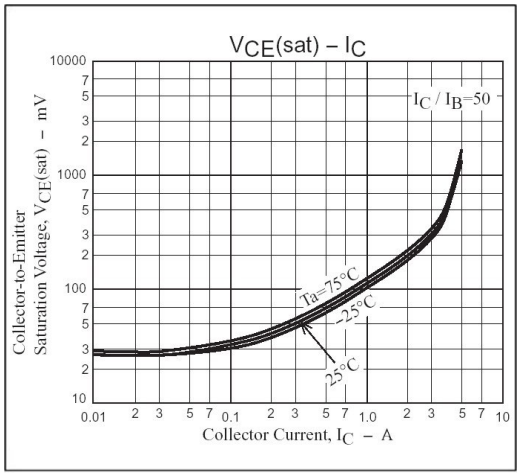
Characteristics Curve

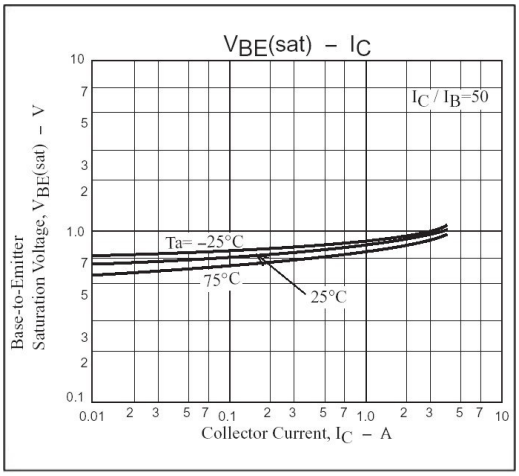


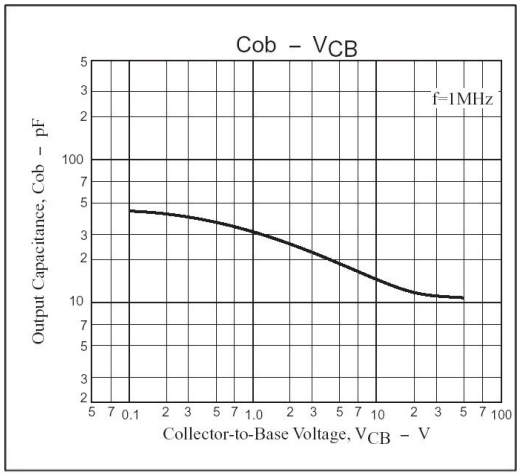


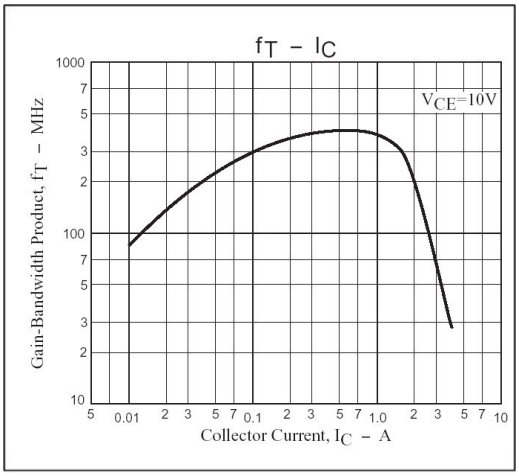


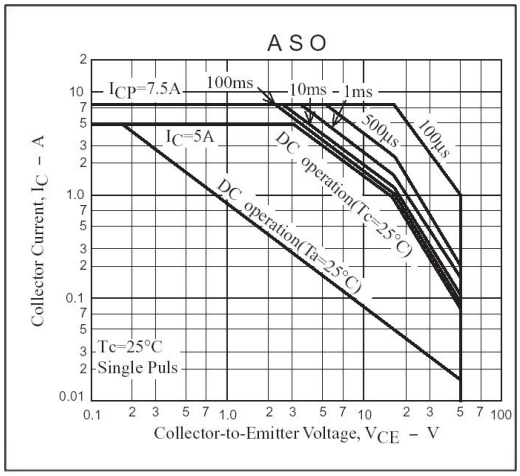


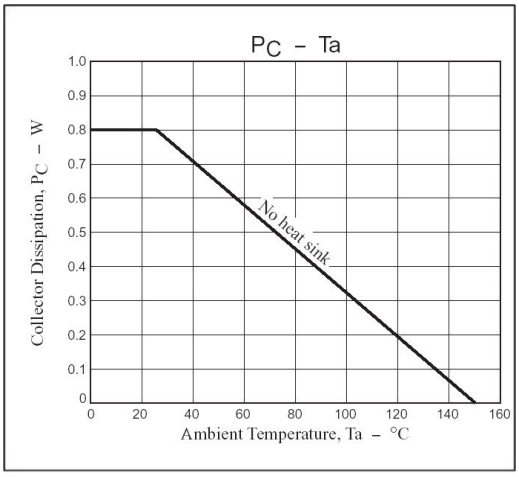


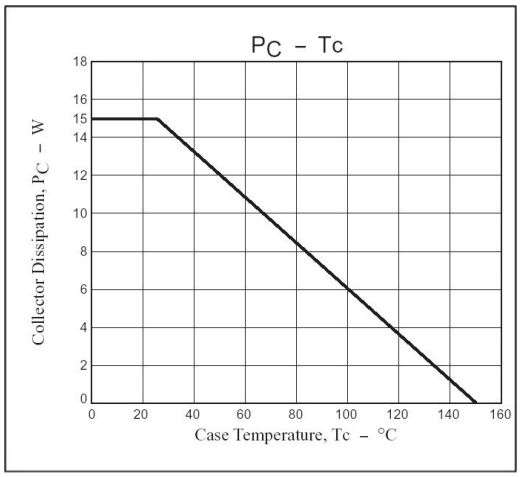












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