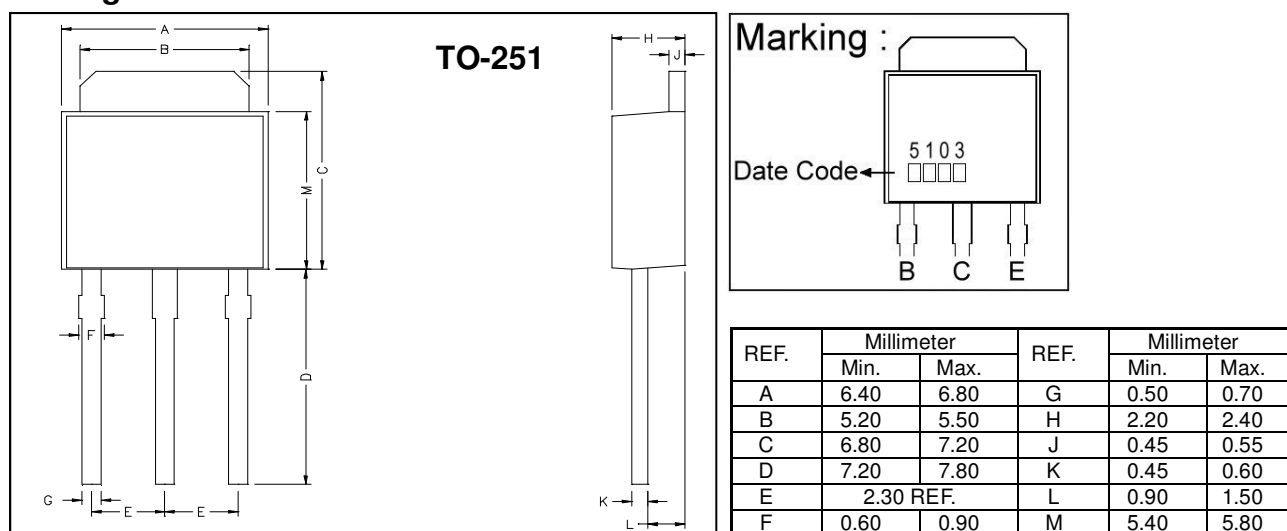


GI5103**NPN HIGH SPEED SWITCHING TRANSISTOR****Description**

The GI5103 is designed for high speed switching applications.

Features

- Low saturation voltage, typically $V_{CE(sat)} = 0.15V$ at $I_C/I_B=3A/0.15A$
- High speed switching, typically $t_f = 0.1\mu s$ at $I_C=3A$
- Wide SOA
- Complements to GI1952

Package Dimensions**Absolute Maximum Ratings (TA=25°C)**

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CB0}	100	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	5	A
Collector Current (Pulse PW=100ms)	I_C	10	A
Total Device Dissipation (TA=25°C)	P_D	1	W
Total Device Dissipation (TC=25°C)	P_D	10	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C

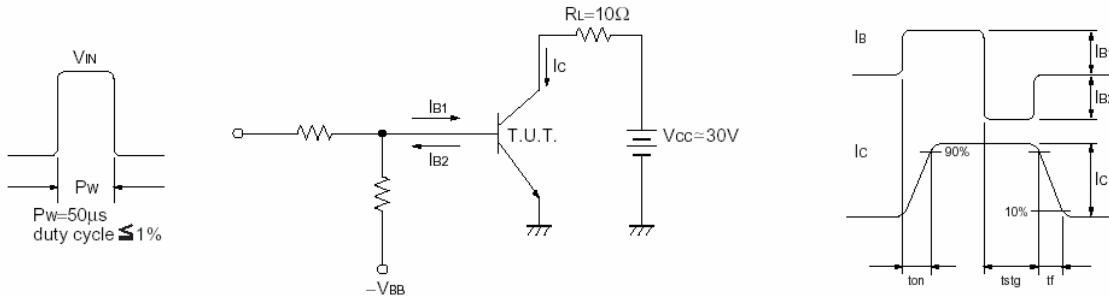
Electrical Characteristics (TA = 25°C unless otherwise noted)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CB0}	100	-	-	V	$I_C=50\mu A, I_E=0$
BV_{CEO}	60	-	-	V	$I_C=1mA, I_B=0$
BV_{EBO}	5	-	-	V	$I_E=50\mu A, I_C=0$
I_{CB0}	-	-	10	μA	$V_{CB}=100V, I_E=0$
I_{EBO}	-	-	10	μA	$V_{EB}=5V, I_C=0$
* $V_{CE(sat)1}$	-	0.15	0.3	V	$I_C=3A, I_B=0.15A$
* $V_{CE(sat)2}$	-	-	0.5	V	$I_C=4A, I_B=0.2A$
* $V_{BE(sat)1}$	-	-	1.2	V	$I_C=3A, I_B=0.15A$
* $V_{BE(sat)2}$	-	-	1.5	V	$I_C=4A, I_B=0.2A$
* h_{FE1}	120	-	270		$V_{CE}=2V, I_C=1A$
* h_{FE2}	40	-	-		$V_{CE}=2V, I_C=3A$
fT	-	210	-	MHz	$V_{CB}=10V, I_E=-0.5A, f=30MHz$
Cob	-	80	-	pF	$V_{CE}=10V, I_E=0, f=1MHz$

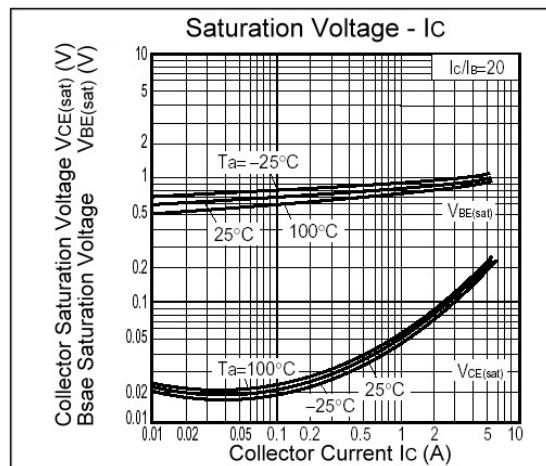
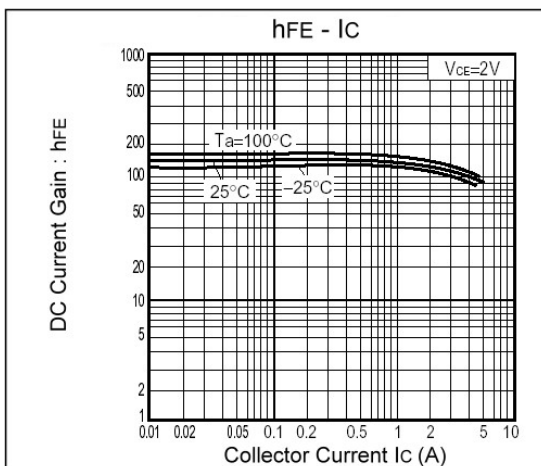
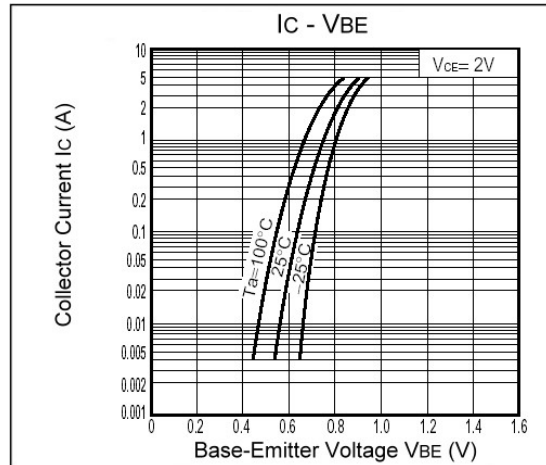
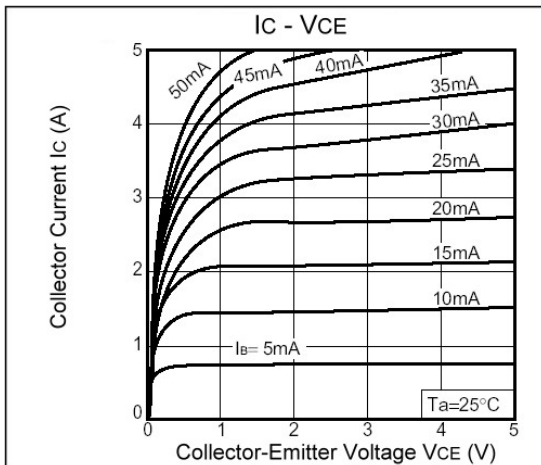
ton (Turn-on Time)	-	-	0.3	uS	IC=3A , RL=10Ω IB1=-IB2=0.15A VCC≈30V
tstg (Storage Time)	-	-	1.5		
tf (Fall Time)	-	0.1	0.3		

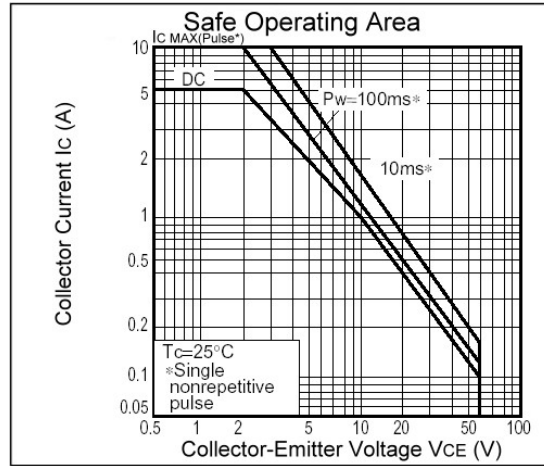
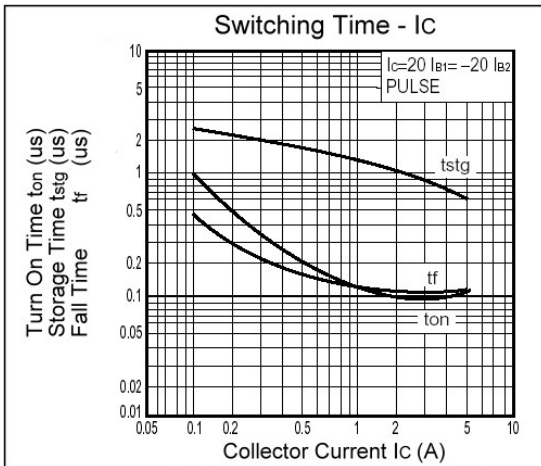
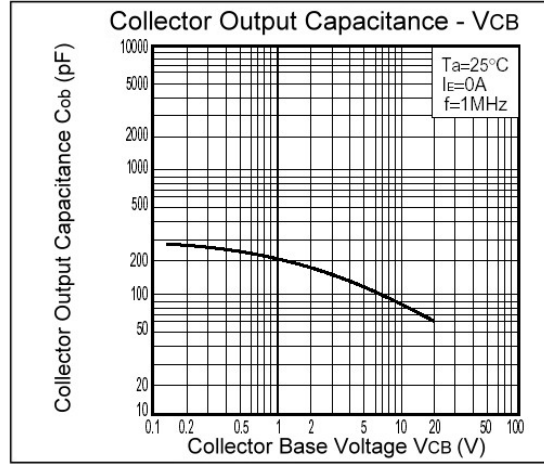
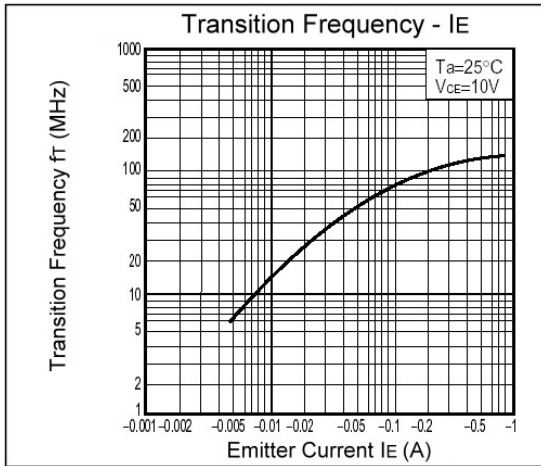
*Measure using pulse current

Switching Time Test Circuit



Characteristics Curve





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