

## GJ1952

### PNP HIGH SPEED SWITCHING TRANSISTOR

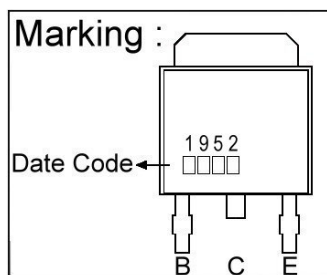
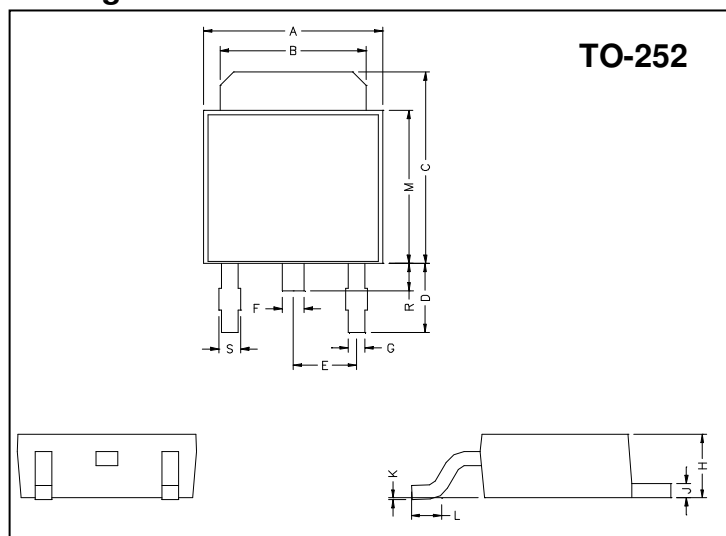
#### Description

The GJ1952 is designed for high speed switching applications.

#### Features

- Low saturation voltage, typically  $V_{CE(sat)} = -0.2V$  at  $I_C/I_B = -3A/-0.15A$
- High speed switching, typically  $t_f = 0.15\mu s$  at  $I_C = -3A$
- Wide SOA
- Complements to GJ5103

#### 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 ( $T_A = 25^\circ C$ )

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	$V_{CBO}$	-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)	$I_C$	-10	A
Total Device Dissipation ( $T_A = 25^\circ C$ )	$P_D$	1	W
Total Device Dissipation ( $T_C = 25^\circ C$ )	$P_D$	10	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ C$

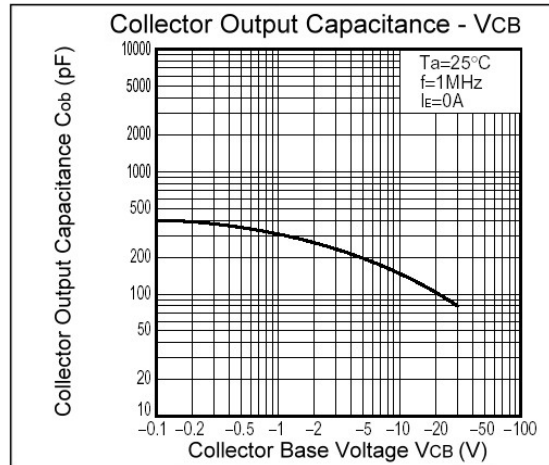
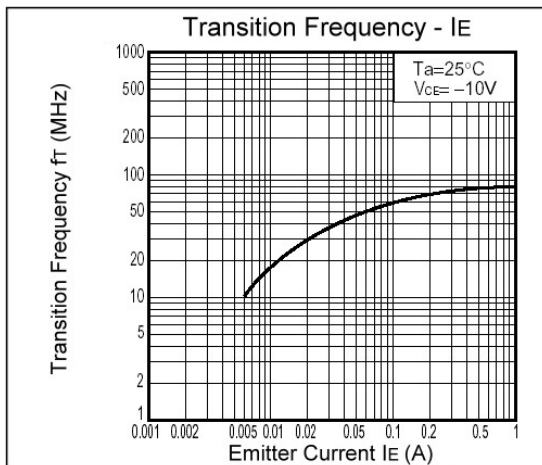
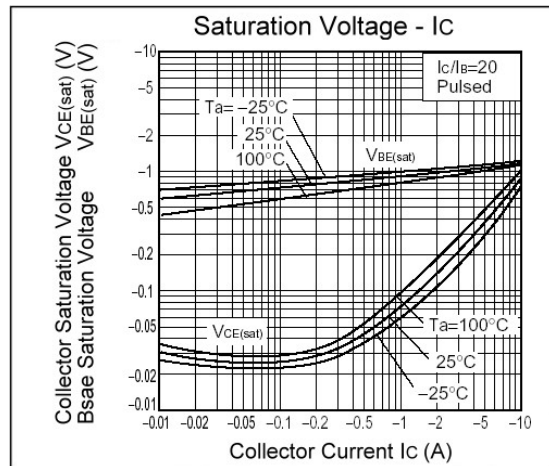
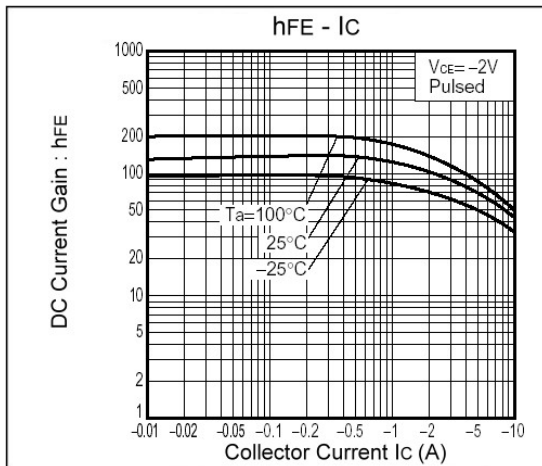
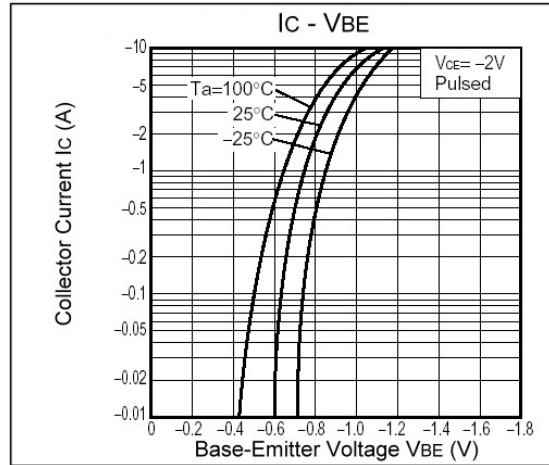
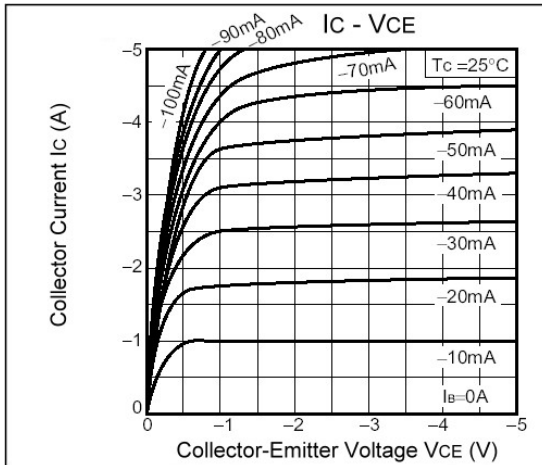
#### Electrical Characteristics ( $T_A = 25^\circ C$ unless otherwise noted)

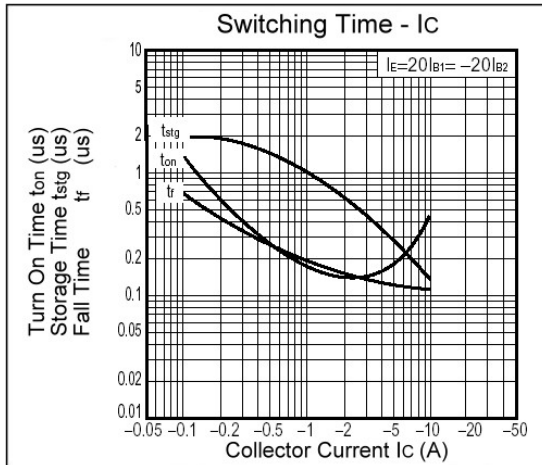
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
$V_{CBO}$	-100	-	-	V	$I_C = -50\mu A, I_E = 0$
$V_{CEO}$	-60	-	-	V	$I_C = -1mA, I_B = 0$
$V_{EBO}$	-5	-	-	V	$I_E = -50\mu A, I_C = 0$
$I_{CBO}$	-	-	-10	$\mu A$	$V_{CB} = -100V, I_E = 0$
$I_{EBO}$	-	-	-10	$\mu A$	$V_{EB} = -5V, I_C = 0$
* $V_{CE(sat)1}$	-	-	-0.3	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	-	-		$V_{CE} = -2V, I_C = -3A$
$f_T$	-	80	-	MHz	$V_{CE} = -10V, I_E = 0.5A, f = 30MHz$
Cob	-	130	-	pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$

ton (Turn-on Time)	-	-	0.3	uS	$I_C = -3A, R_L = 10\Omega$ $I_{B1} = -I_{B2} = -0.15A$ $V_{CC} \approx -30V$
tstg (Storage Time)	-	-	1.5		
tf (Fall Time)	-	-	0.3		

\*Measure using pulse current

## Characteristics Curve





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