

## GJ1060

### NPN EPITAXIAL PLANAR TRANSISTOR

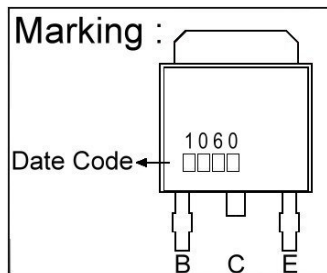
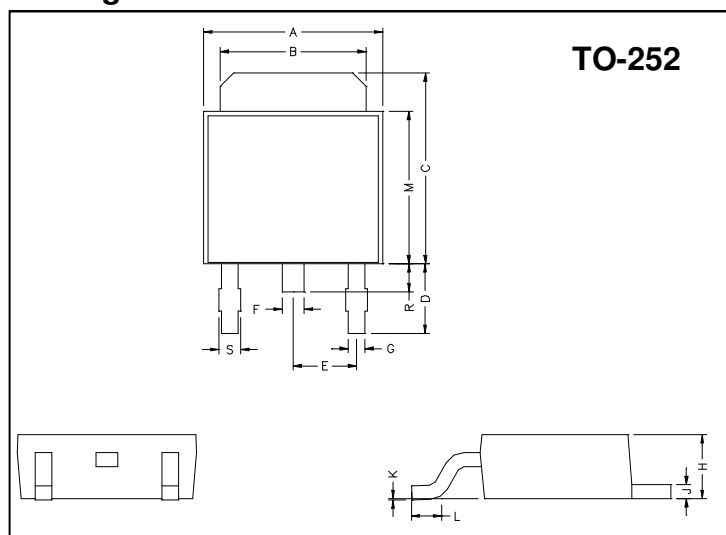
#### Description

The GJ1060 is designed for relay drivers, high-speed inverters, converters and other general large-current switching.

#### Features

- Low Collector-Emitter Saturation Voltage :  $V_{CE(sat)} = 0.4V$  (Max.) @  $I_C = 3A$ ,  $I_B = 0.3A$ ,

#### 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	$V_{CB0}$	60	V
Collector to Emitter Voltage	$V_{CE0}$	50	V
Emitter to Base Voltage	$V_{EB0}$	6	V
Collector Current	$I_C$	5	A
Collector Current (Pulse)	$I_{CP}$	9	A
Total Device Dissipation ( $T_C = 25^\circ C$ )	$P_D$	20	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)

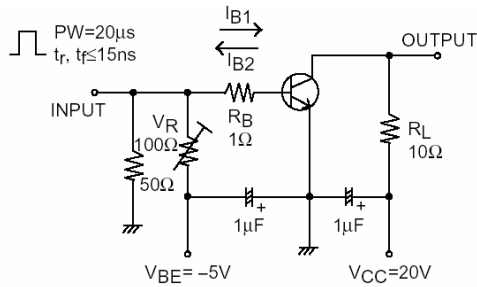
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
$V_{CB0}$	60	-	-	V	$I_C = 1mA$ , $I_E = 0$
$V_{CE0}$	50	-	-	V	$I_C = 1mA$ , $I_B = 0$
$V_{EB0}$	6	-	-	V	$I_E = 1mA$ , $I_C = 0$
$I_{CBO}$	-	-	100	$\mu A$	$V_{CB} = 40V$ , $I_E = 0$
$I_{EBO}$	-	-	100	$\mu A$	$V_{EB} = 4V$ , $I_C = 0$
* $V_{CE(sat)}$	-	-	0.4	V	$I_C = 3A$ , $I_B = 0.3A$
* $h_{FE1}$	70	-	280		$V_{CE} = 2V$ , $I_C = 1A$
* $h_{FE2}$	30	-	-		$V_{CE} = 2V$ , $I_C = 3A$
$f_T$	-	30	-	MHz	$V_{CE} = 5V$ , $I_C = 1A$
$C_{ob}$	-	100	-	pF	$V_{CB} = 10V$ , $I_E = 0$ , $f = 1MHz$
$t_{on}$ (Turn-on Time)	-	0.1	-	$\mu S$	See specified test circuit
$t_{stg}$ (Storage Time)	-	1.4	-		
$t_f$ (Fall Time)	-	0.2	-		

\*Pulse Test: Pulse Width  $\leq 380\mu s$ , Duty Cycle  $\leq 2\%$

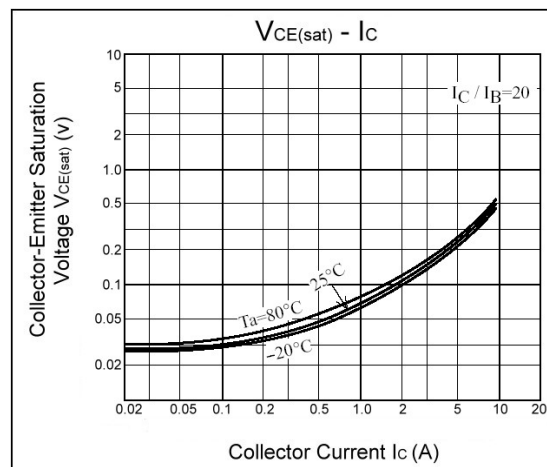
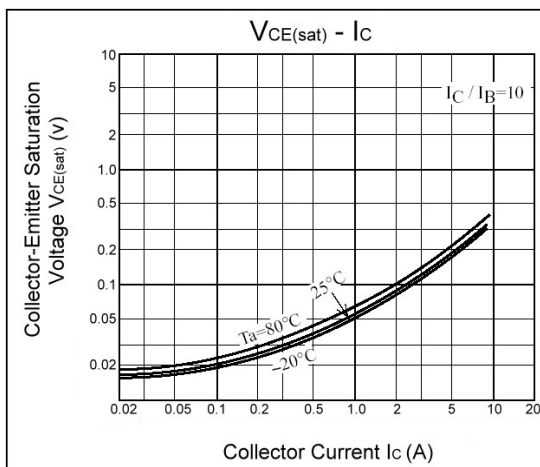
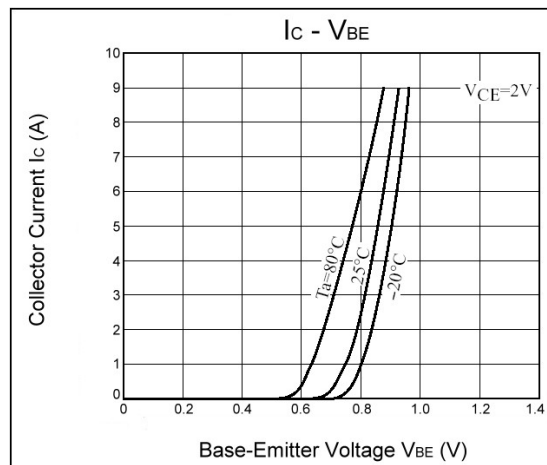
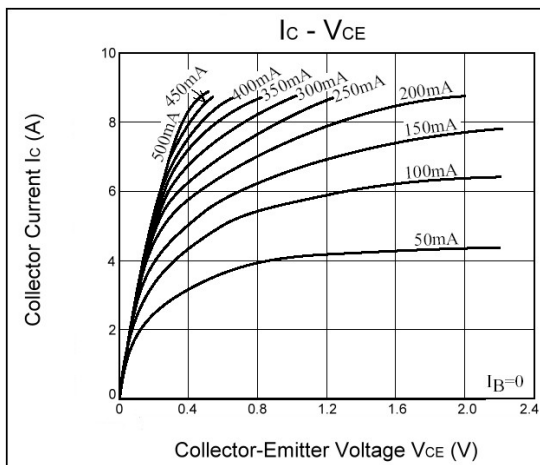
## Classification Of hFE1

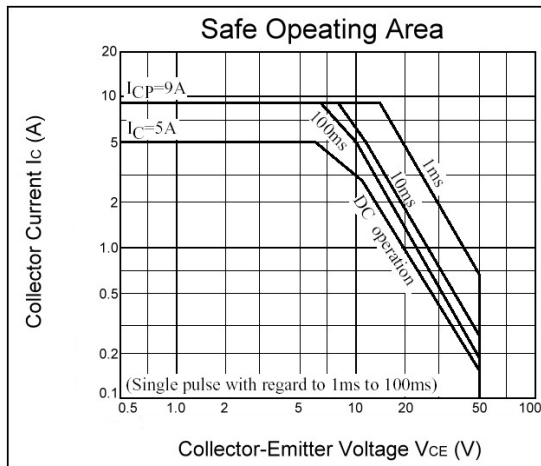
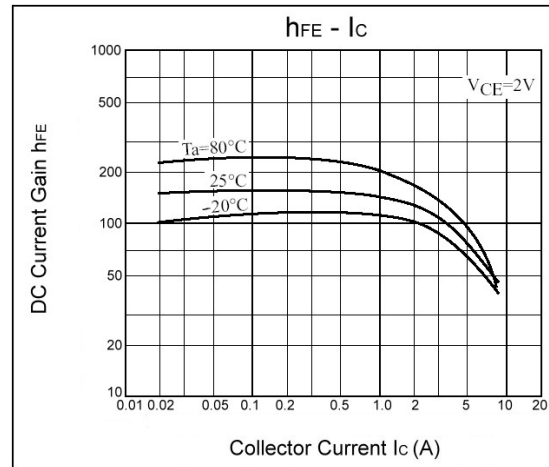
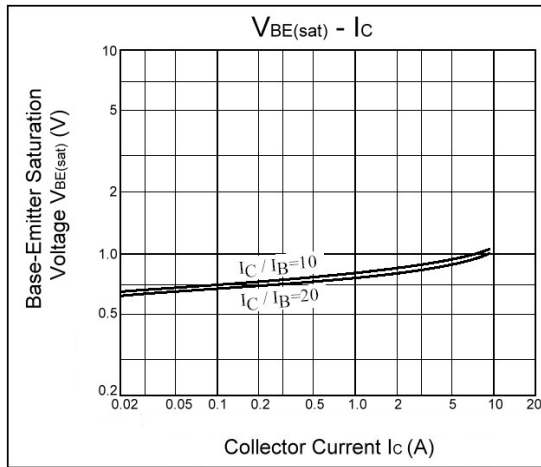
Rank	Q	R	S
Range	70 - 140	100 - 200	140 - 280

## Switching Time Test Circuit



## Characteristics Curve





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