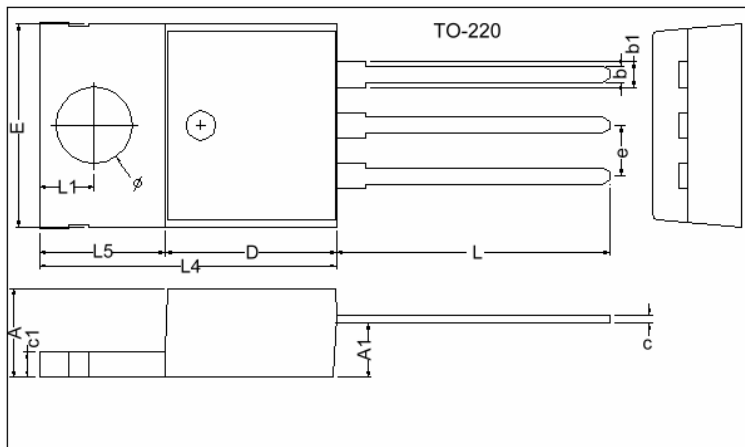
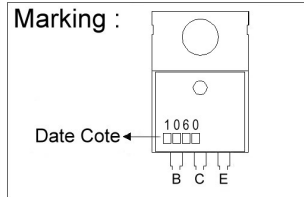


GESD1060**NPN EPITAXIAL PLANAR TRANSISTOR****Description**

The GESD1060 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**Marking :**

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.80	c1	1.25	1.45
b	0.76	1.00	b1	1.17	1.47
c	0.36	0.50	L	13.25	14.25
D	8.60	9.00	e	2.54 REF.	
E	9.80	10.4	L1	2.60	2.89
L4	14.7	15.3	Ø	3.71	3.96
L5	6.20	6.60	A1	2.60	2.80

Absolute Maximum Ratings ($T_A = 25^\circ C$)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	60	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}	9	A
Total Device Dissipation ($T_C = 25^\circ C$)	P_D	30	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)

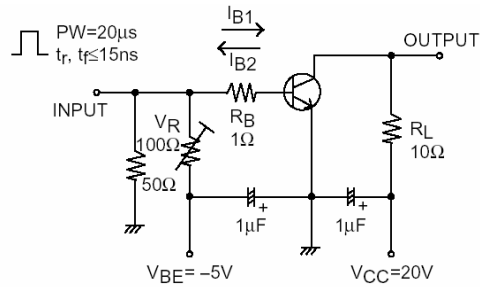
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	60	-	-	V	$I_C = 1mA$, $I_E = 0$
BV_{CEO}	50	-	-	V	$I_C = 1mA$, $I_B = 0$
BV_{EBO}	6	-	-	V	$I_E = 1mA$, $I_C = 0$
I_{CBO}	-	-	100	μA	$V_{CB} = 40V$, $I_E = 0$
I_{EBO}	-	-	100	μA	$V_{EB} = 4V$, $I_C = 0$
* $V_{CE(sat)}$	-	-	0.4	V	$I_C = 3A$, $I_B = 0.3A$
* h_{FE1}	70	-	280		$V_{CE} = 2V$, $I_C = 1A$
* h_{FE2}	30	-	-		$V_{CE} = 2V$, $I_C = 3A$
fT	-	30	-	MHz	$V_{CE} = 5V$, $I_C = 1A$
Cob	-	100	-	pF	$V_{CB} = 10V$, $I_E = 0$, $f = 1MHz$
ton (Turn-on Time)	-	0.1	-	μS	See specified test circuit
tstg (Storage Time)	-	1.4	-		
tf (Fall Time)	-	0.2	-		

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

Classification Of hFE1

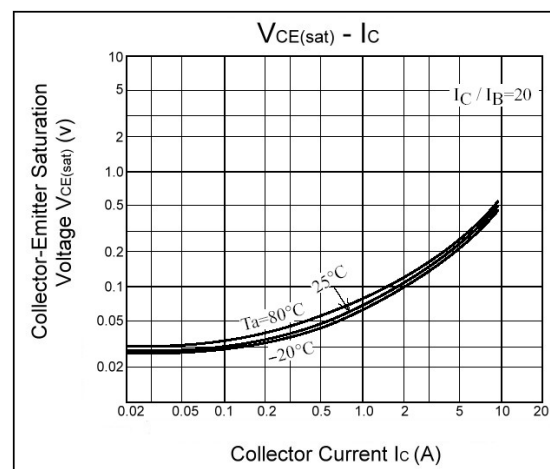
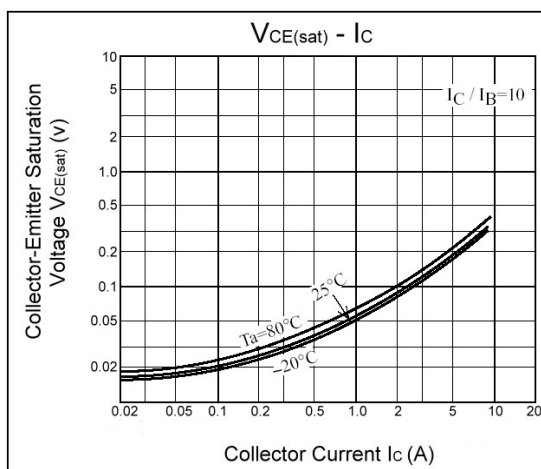
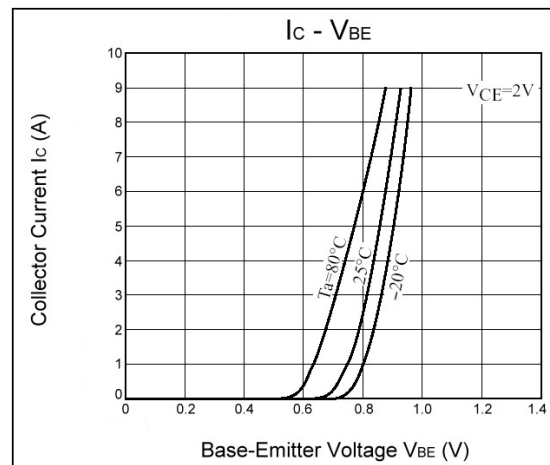
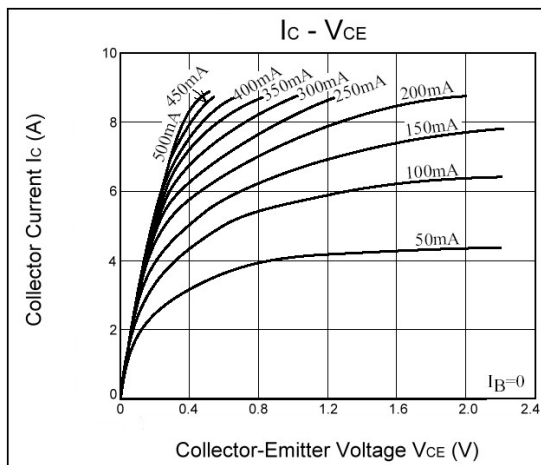
Rank	Q	R	S
Range	70 - 140	100 - 200	140 - 280

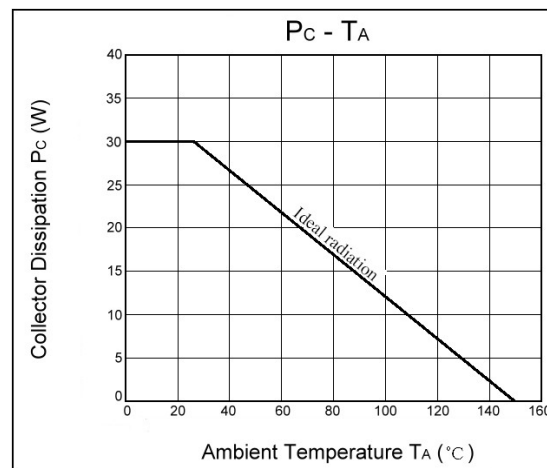
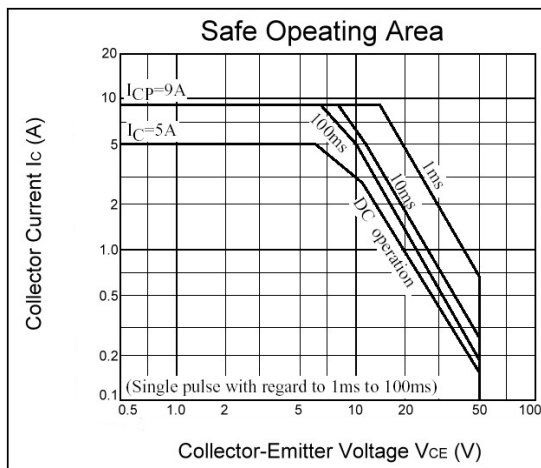
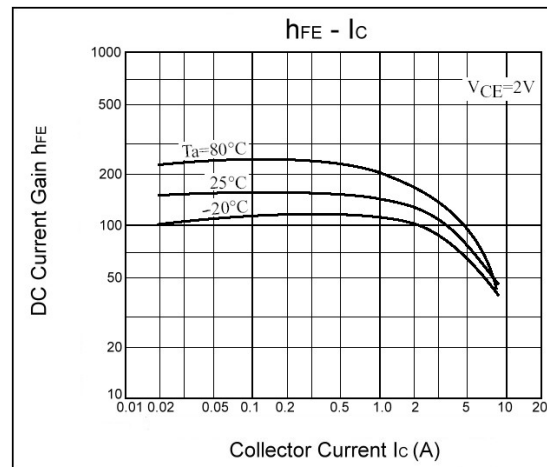
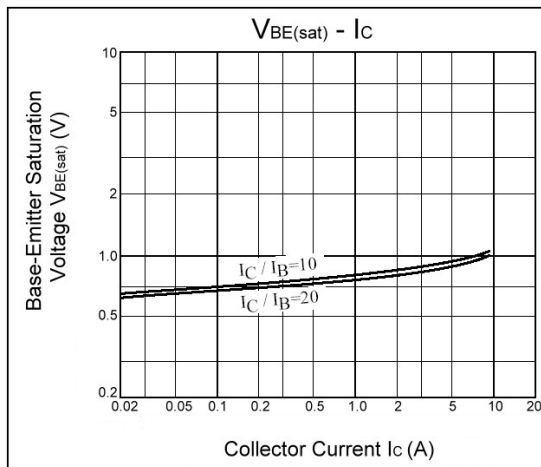
Switching Time Test Circuit



$$I_C = 10I_{B1} = -10I_{B2} = 2A$$

Characteristics Curve





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