

<b>SANYO</b>	No.3135A	<b>2SA1731</b>
	PNP Epitaxial Planar Silicon Transistor	
High-Speed Switching Applications		

**Features**

- Adoption of FBET, MBIT processes
- Large current capacity
- Low collector-to-emitter saturation voltage
- Fast switching speed

**Absolute Maximum Ratings at Ta = 25°C**

Collector to Base Voltage	$V_{CB0}$	-50	V	unit
Collector to Emitter Voltage	$V_{CEO}$	-40	V	
Emitter to Base Voltage	$V_{EBO}$	-5	V	
Collector Current	$I_C$	-5	A	
Collector Current(Pulse)	$I_{CP}$	-8	A	
Collector Dissipation	$P_C$	1	W	
	$T_c = 25^\circ C$	15	W	
Junction Temperature	$T_j$	150	°C	
Storage Temperature	$T_{stg}$	-55 to +150	°C	

**Electrical Characteristics at Ta = 25°C**

			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = -40V, I_E = 0$			-1	μA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = -3V, I_C = 0$			-1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -2V, I_C = -500mA$	70*		280*	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -5A$	25			
Gain-Bandwidth Product	$f_T$	$V_{CE} = -2V, I_C = -500mA$		300		MHz
Output Capacitance	$c_{ob}$	$V_{CB} = -10V, f = 1MHz$		60		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -2.5A, I_B = -125mA$	-0.3	-0.8		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -2.5A, I_B = -125mA$	-0.95	-1.3		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-40			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V

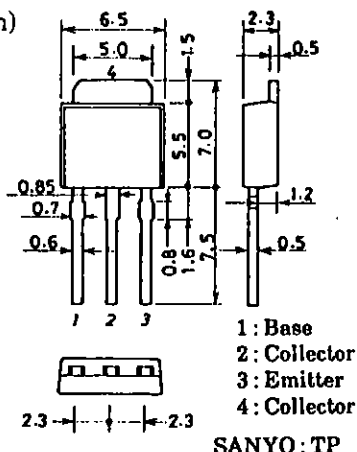
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\*: The 2SA1731 is classified by 500mA  $h_{FE}$  as follows:

70 Q 140	100 R 200	140 S 280
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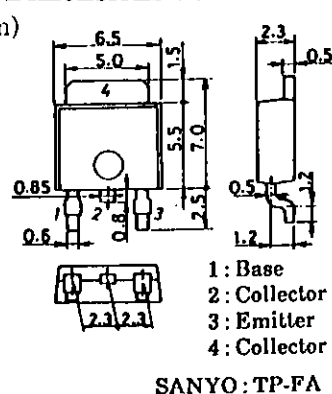
**Package Dimensions 2045B**

(unit : mm)



**Package Dimensions 2044B**

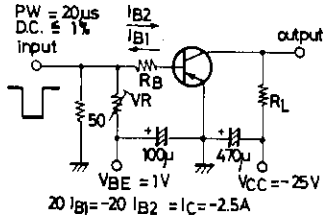
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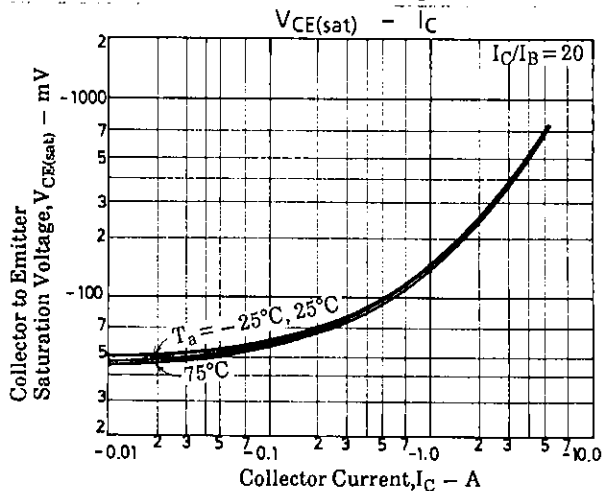
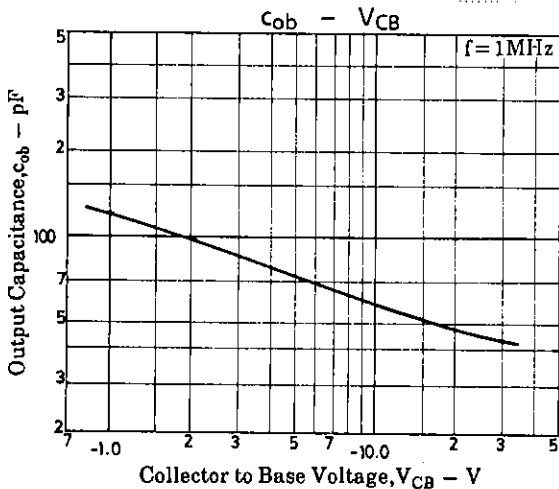
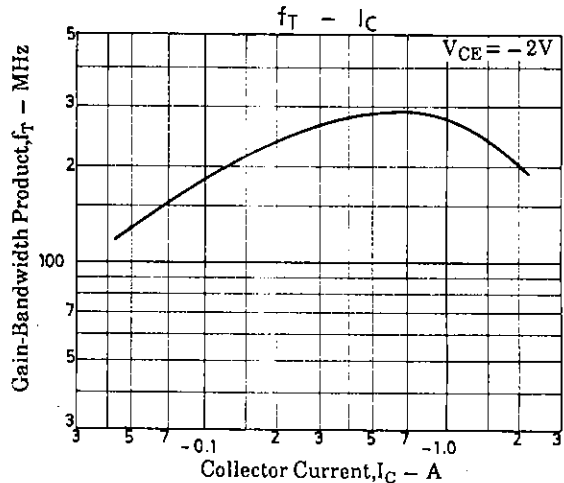
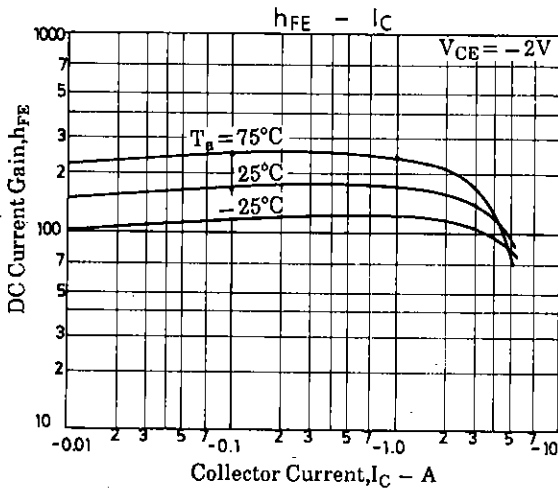
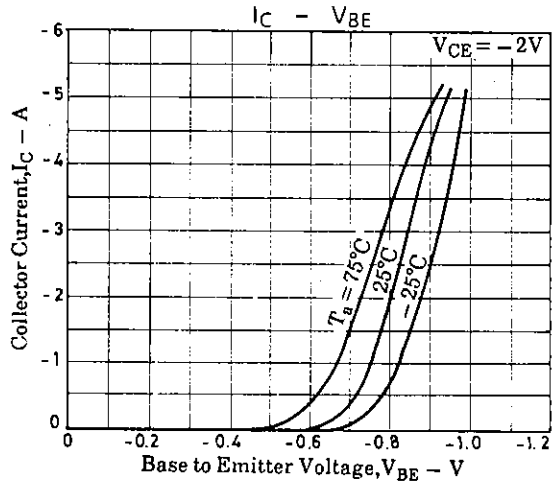
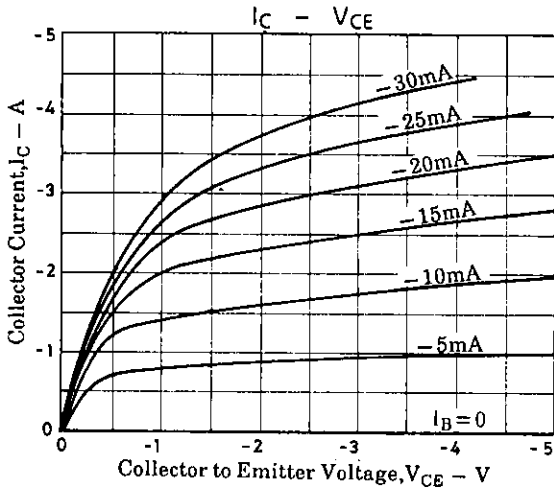
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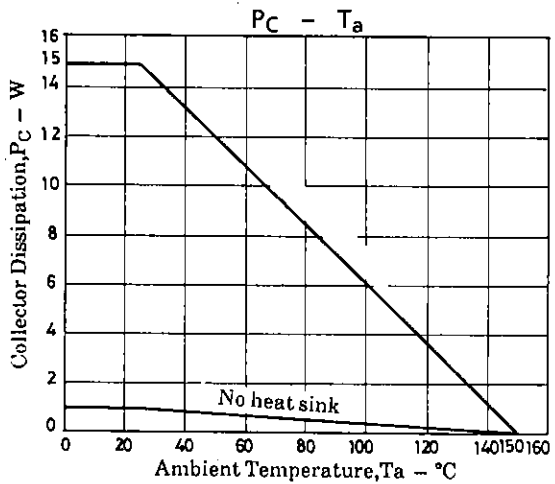
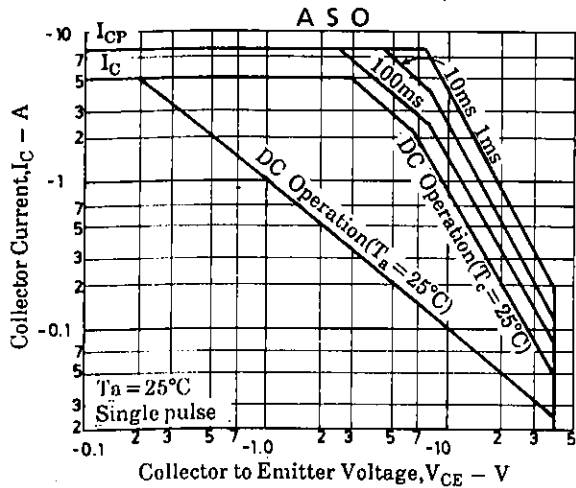
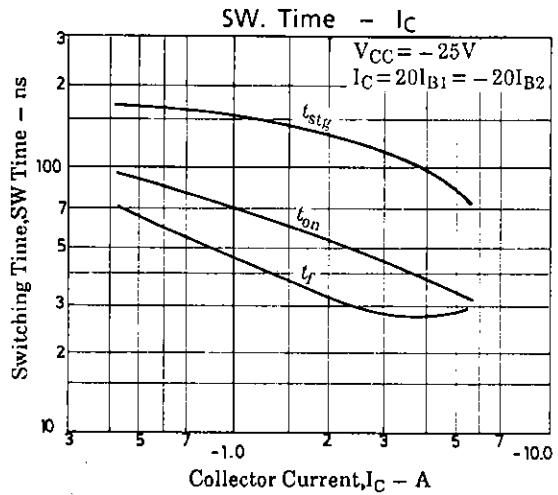
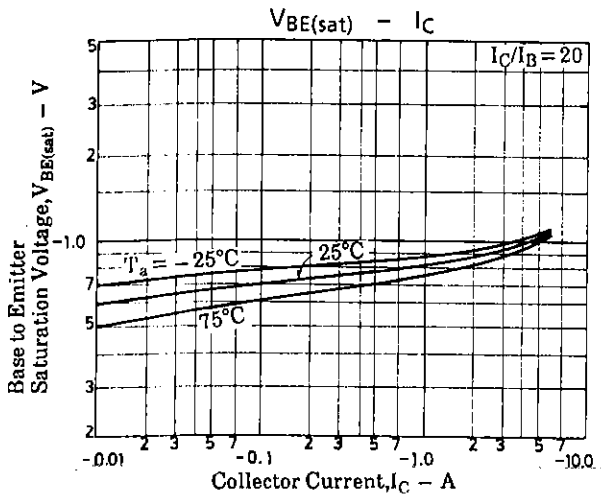
			min	typ	max	unit
Turn-ON Time	$t_{on}$	See specified Test Circuit.		50	100	ns
Storage Time	$t_{stg}$	∞		120	220	ns
Turn-OFF Time	$t_{off}$	∞		150	300	ns

Switching Time Test Circuit



Unit (Resistance : Ω, Capacitance : F)





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