

SANYO	No.4133	2SA1854
		PNP Epitaxial Planar Silicon Transistor 20V/5A Switching Applications

Applications

- Strobes, power supplies, relay drivers, lamp drivers.

Features

- Adoption of FBET and MBIT processes.
- Large allowable collector dissipation.
- Low saturation voltage.
- Large current capacity.
- Fast switching speed.
- Usage of radial taping to meet automatic mounting.

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector-to-Base Voltage	V_{CBO}	-25	V
Collector-to-Emitter Voltage	V_{CEO}	-20	V
Emitter-to-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-5	A
Collector Current (Pulse)	I_{CP}	-8	A
Base Current	I_B	-0.5	A
Collector Dissipation	P_C	1.5	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics at Ta = 25°C

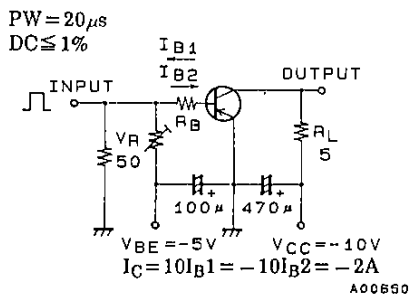
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = -20V, I_E = 0$			-500	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -4V, I_C = 0$			-500	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -2V, I_C = -500mA$	100*	60	400*	
Gain Bandwidth Product	f_T	$V_{CE} = -5V, I_C = -200mA$		320		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10V, f = 1MHz$		60		pF

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* : The 2SA1854 is classified by 500mA h_{FE} as follows :

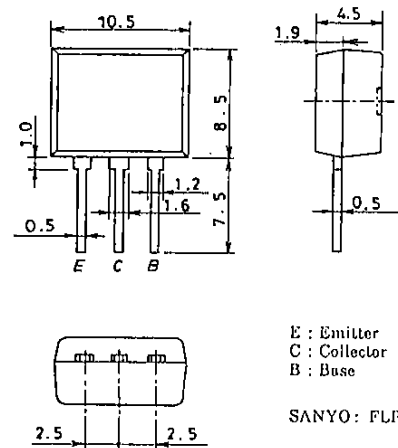
100	R	200	140	S	280	200	T	400
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Switching Time Test Circuit



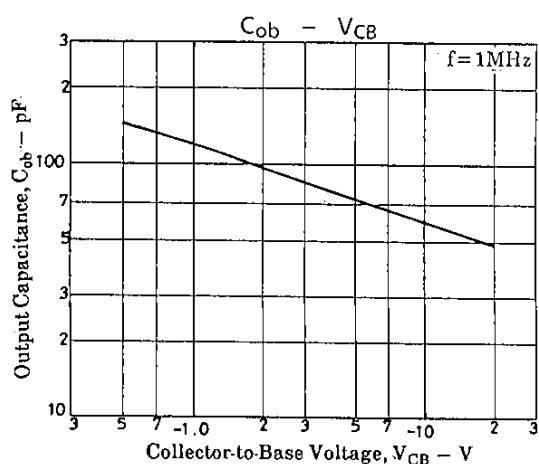
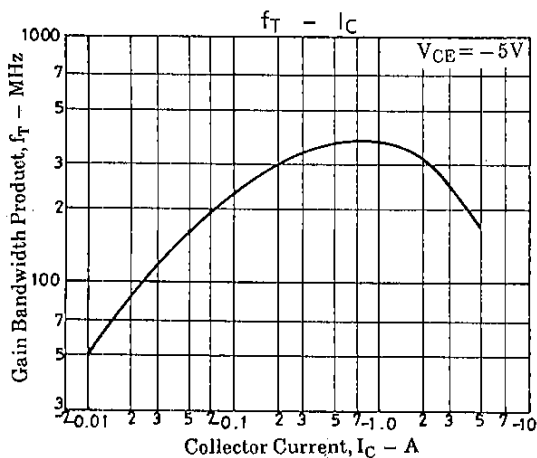
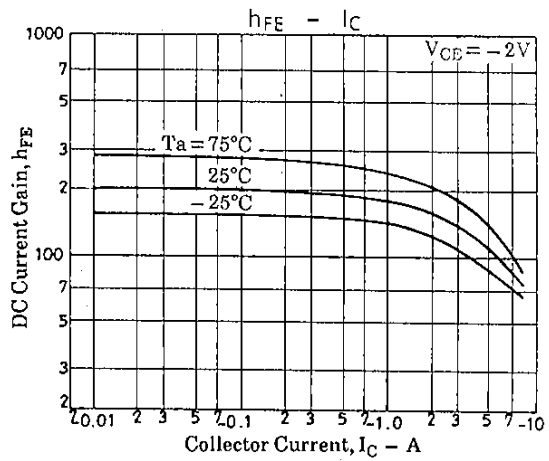
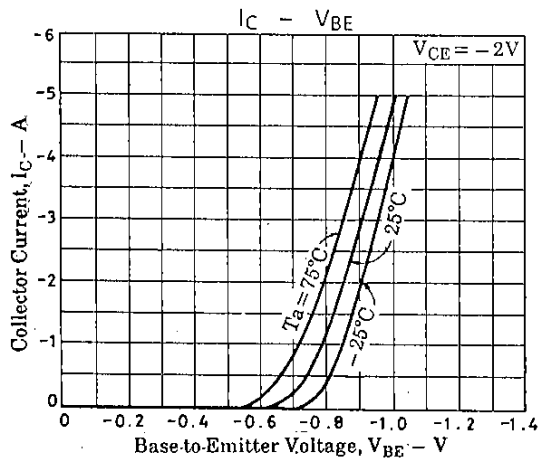
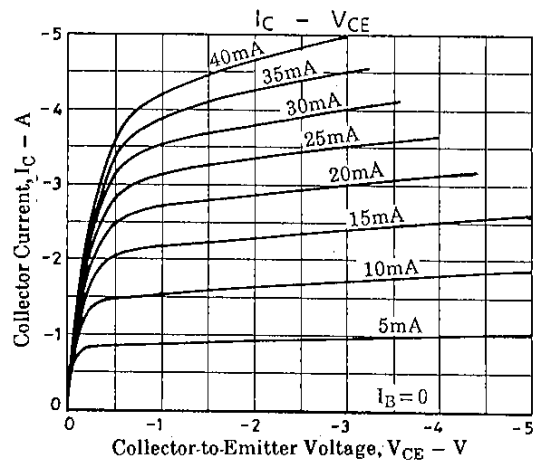
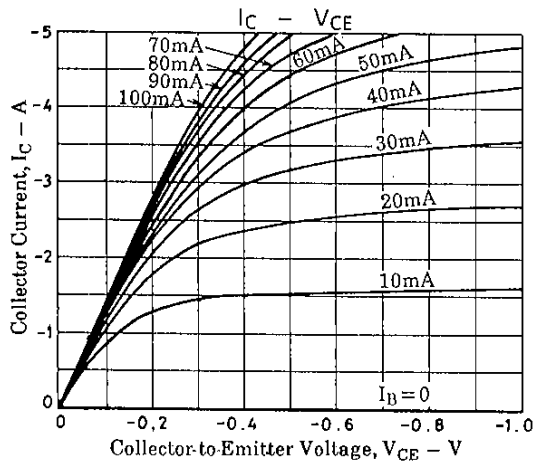
Unit (Resistance : Ω, Capacitance : F)

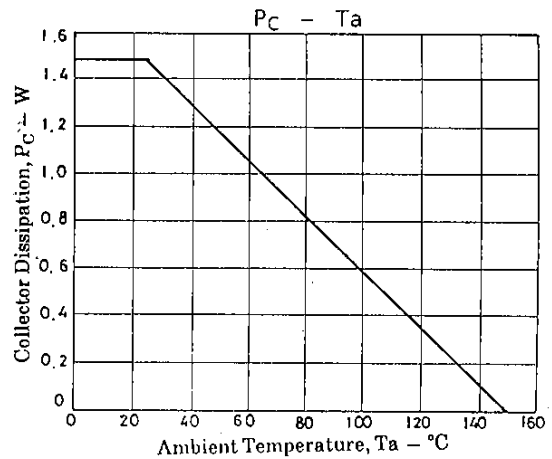
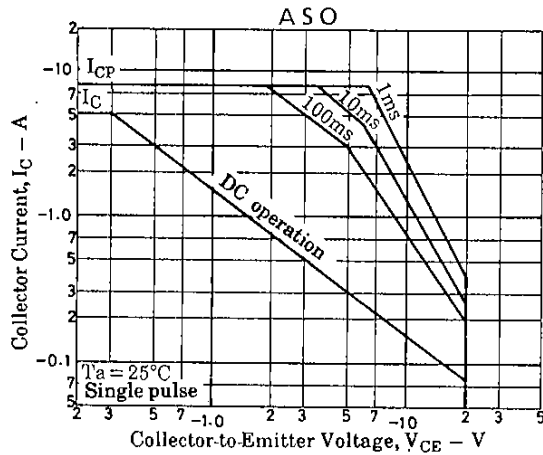
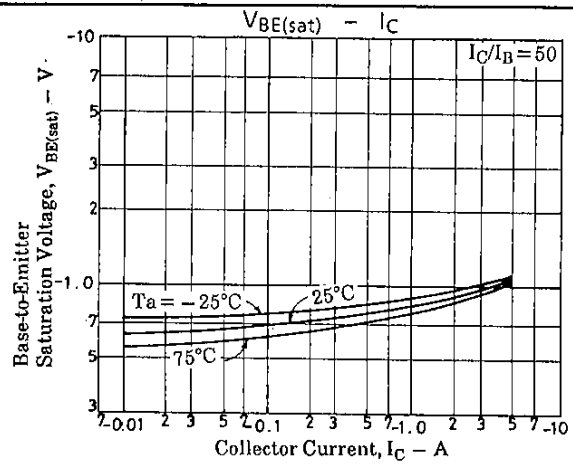
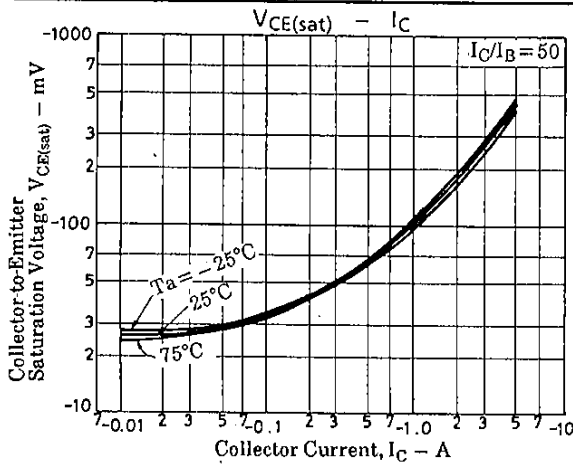
Package Dimensions 2084



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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -3A, I_B = -60mA$	-250	-500		mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -3A, I_B = -60mA$	-1.0	-1.3		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Turn ON Time	t_{on}	See specified Test Circuit.		40		ns
Storage Time	t_{stg}	"		200		ns
Fall Time	t_f	"		10		ns





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