Ordering number: EN4133

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	Tj	150	°C
Storage Temperature	Tstg	−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※		400※	
	$h_{FE}(2)$	$V_{CE}=-2V, I_C=-4A$	60			
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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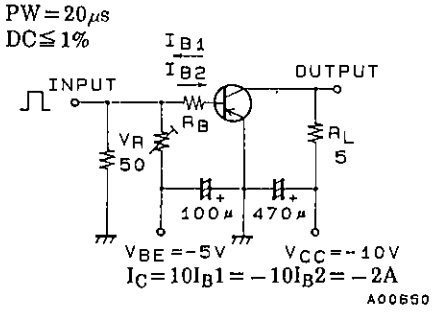
※ : The 2SA1854 is classified by 500mA h_{FE} as follows :

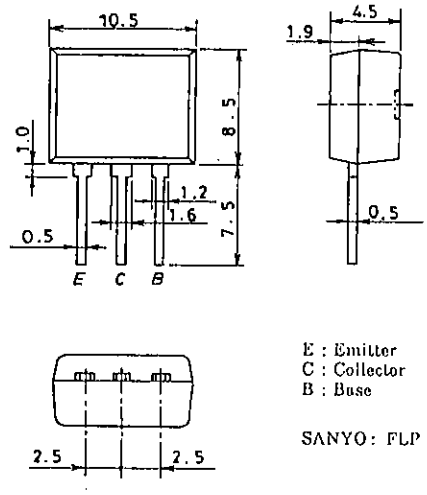
100 R 200	140 S 280	200 T 400

Switching Time Test Circuit



Unit (Resistance : Ω, Capacitance : F)

Package Dimensions 2084



E : Emitter
C : Collector
B : Base

SANYO : FLP

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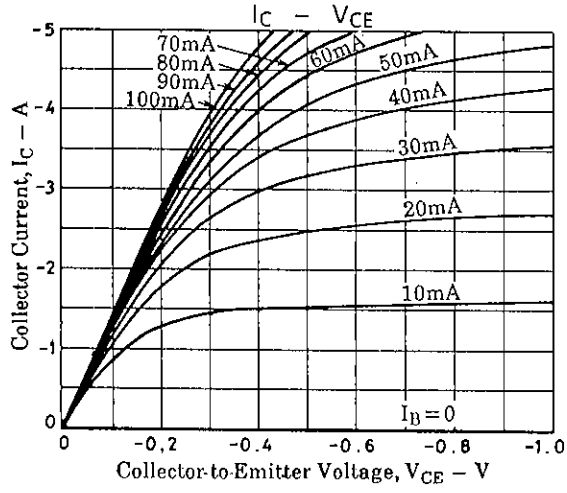
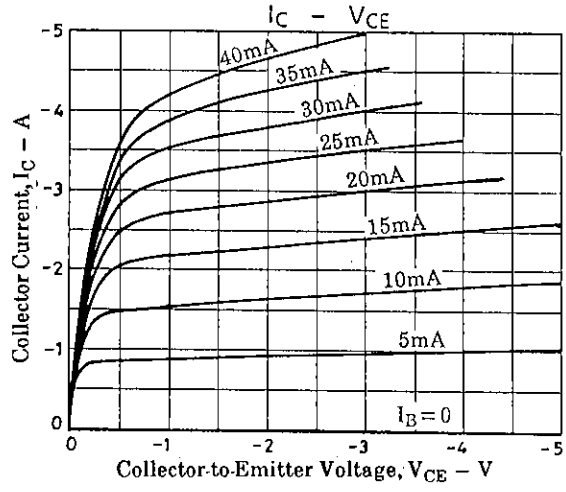
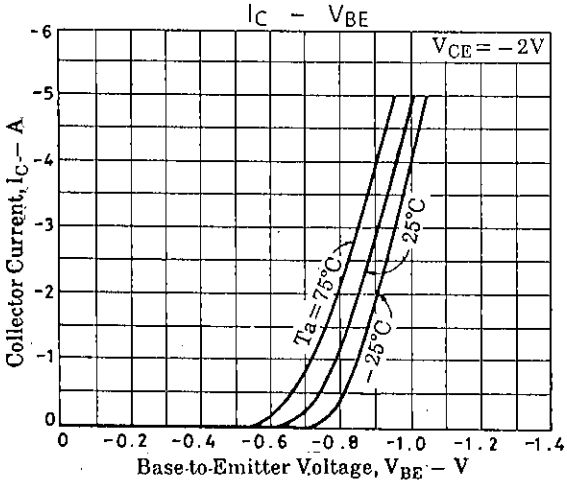
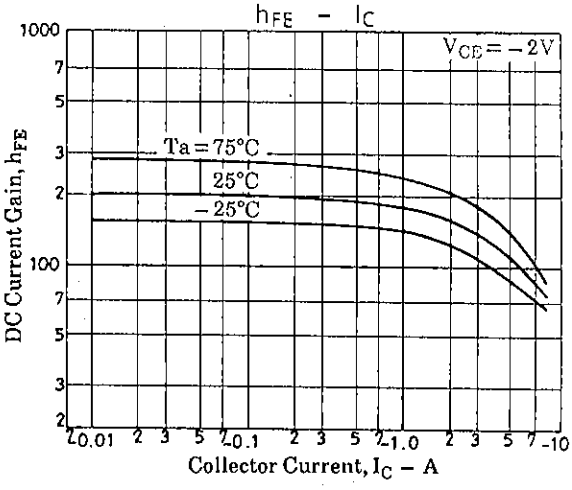
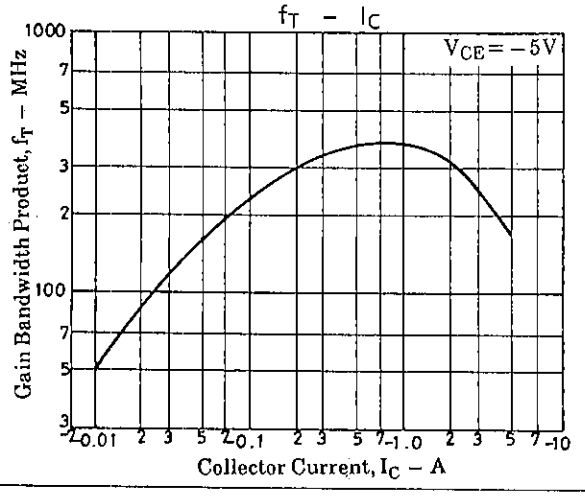
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=-3A$, $I_B=-60mA$		-250	-500	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=-3A$, $I_B=-60mA$		-1.0	-1.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu A$, $I_E=0$	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA$, $R_{BE}=\infty$	-20			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

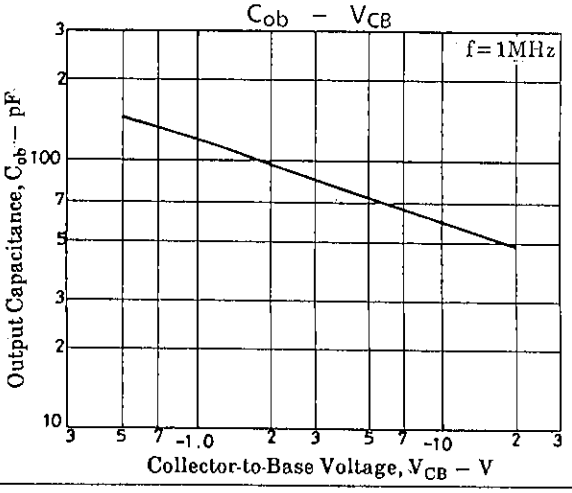


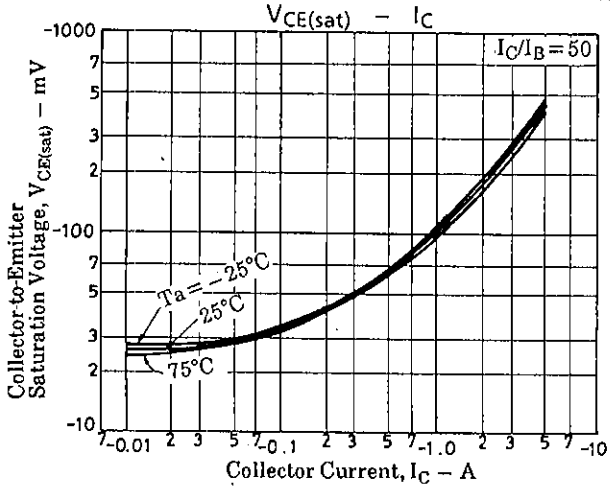


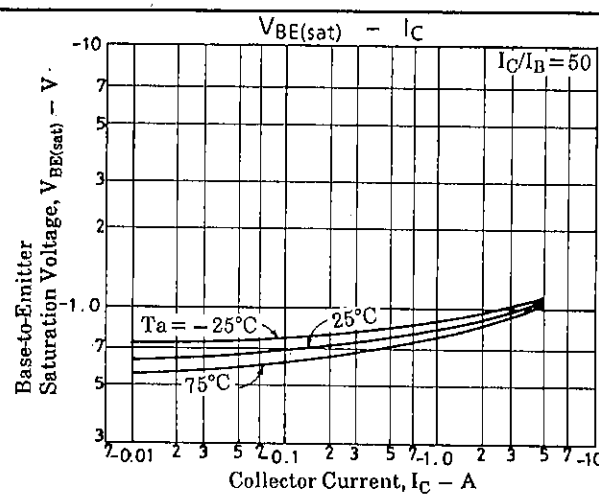


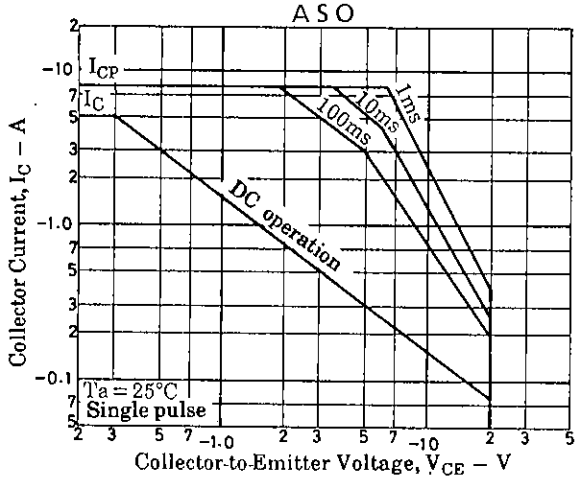


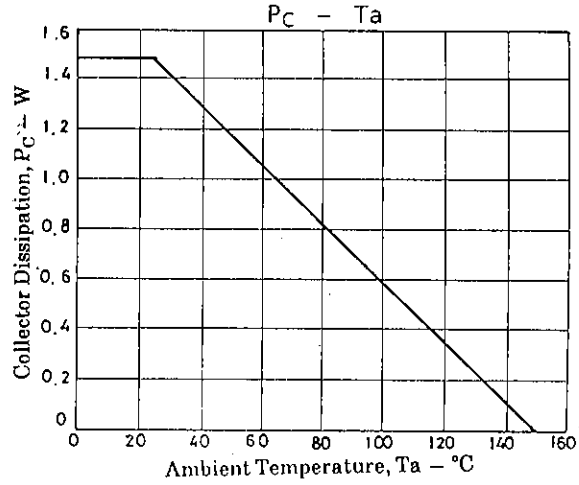












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