

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 _{CB0}	-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

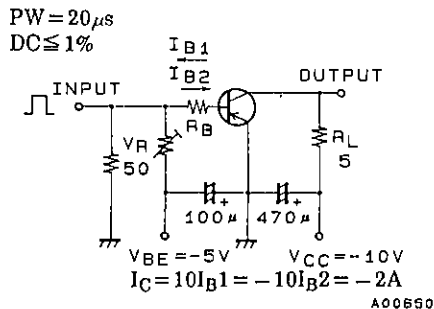
			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = -20V, I _E = 0			-500	nA
Emitter Cutoff Current	I _{EBO}	V _{EB} = -4V, I _C = 0			-500	nA
DC Current Gain	h _{FE} (1)	V _{CE} = -2V, I _C = -500mA	100	※	400	※
				60		
Gain Bandwidth Product	f _T	V _{CE} = -5V, I _C = -200mA		320		MHz
					60	
Output Capacitance	C _{ob}	V _{CB} = -10V, f = 1MHz				

Continued on next page.

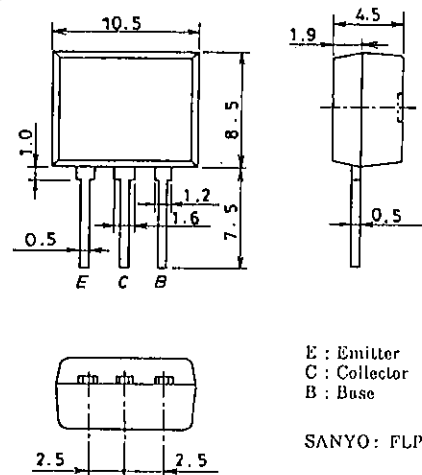
※ : The 2SA1854 is classified by 500mA h_{FE} as follows :

100 R 200	140 S 280	200 T 400
-----------	-----------	-----------

Switching Time Test Circuit

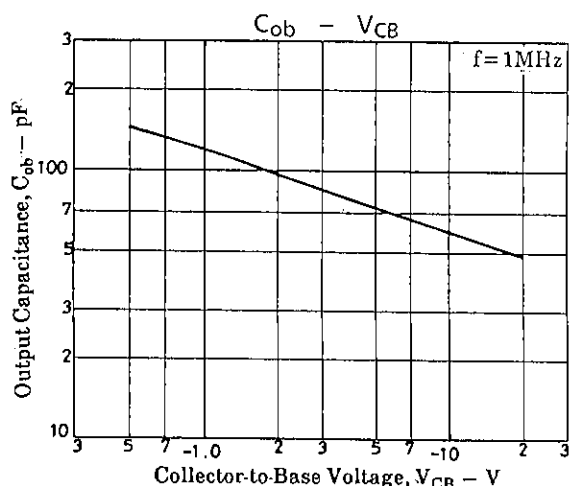
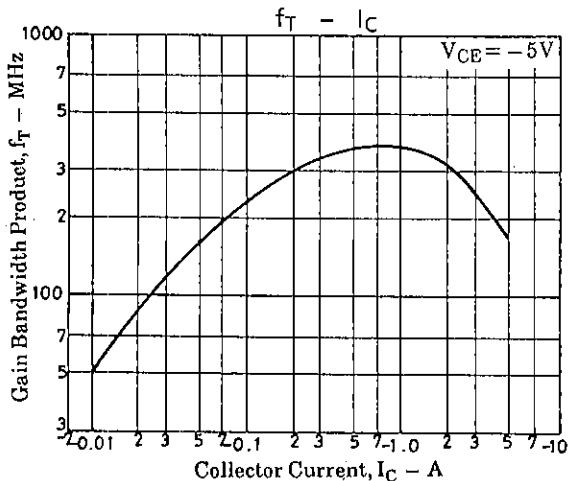
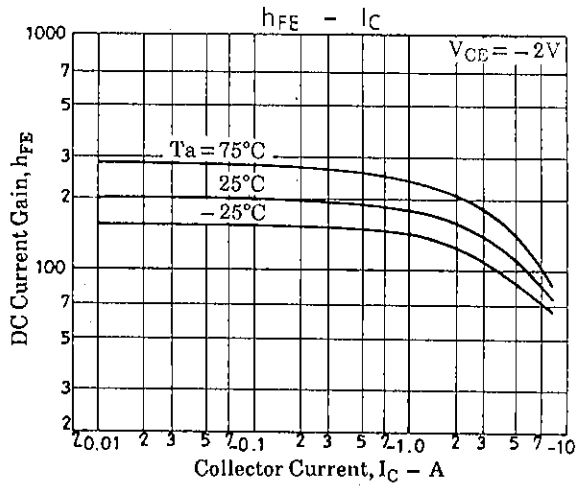
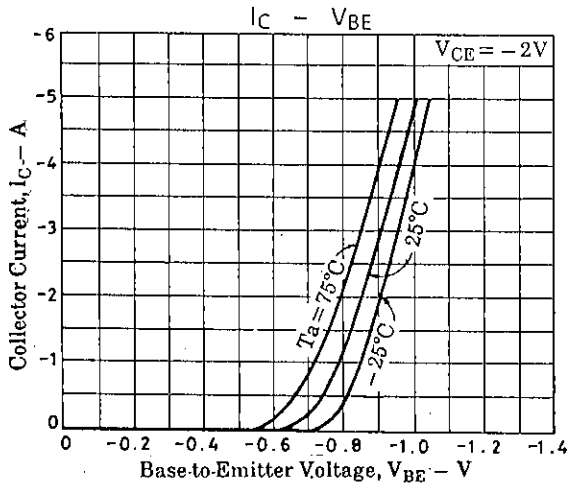
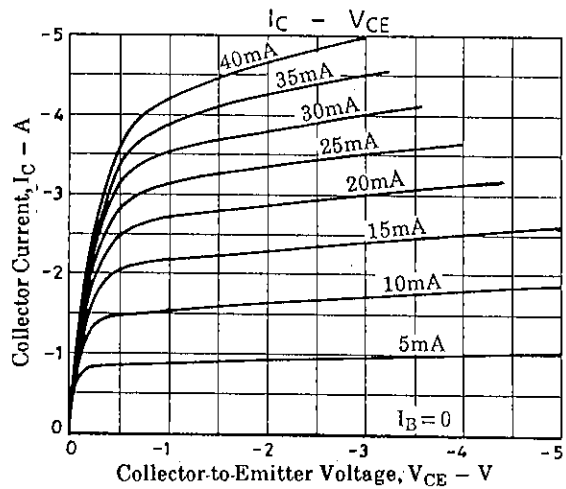
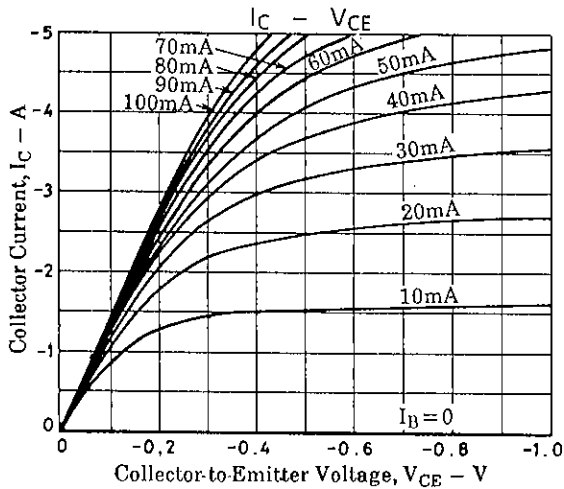


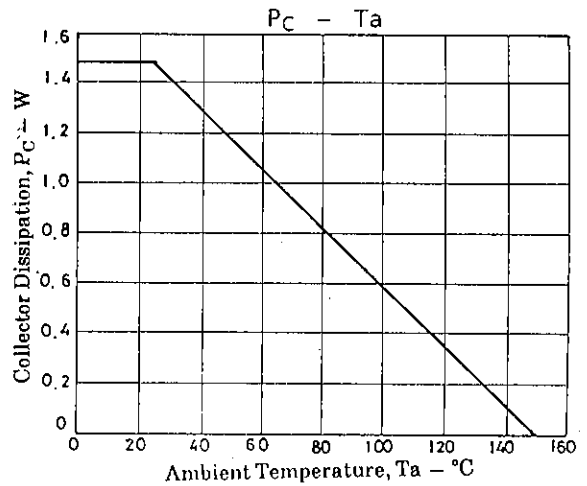
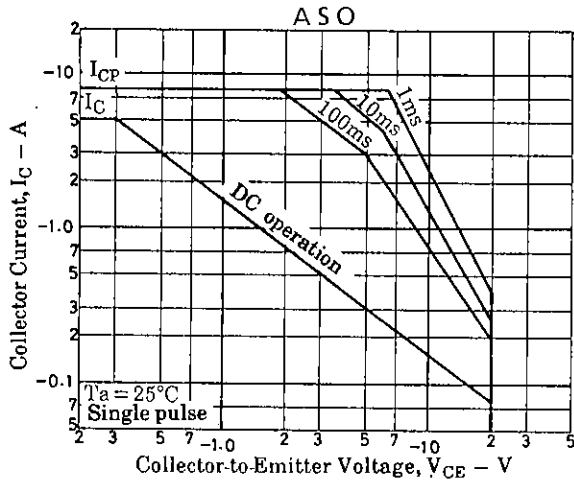
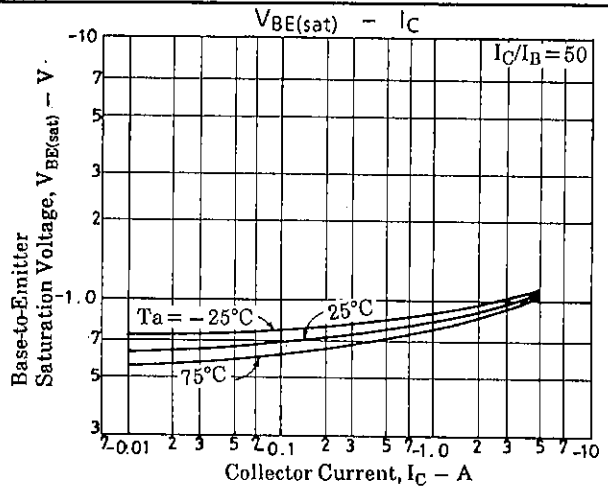
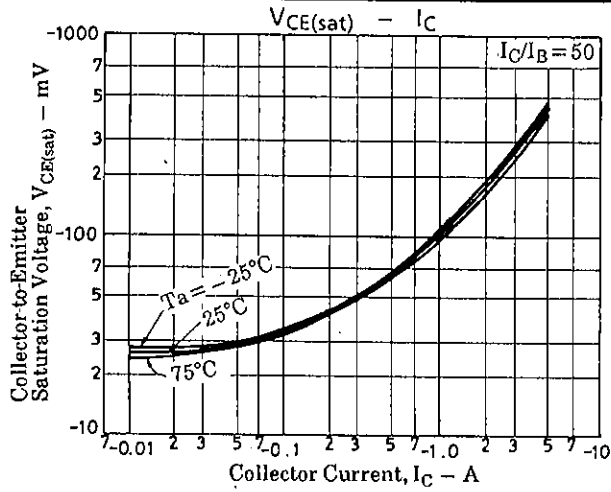
Package Dimensions 2084



Continued from preceding page.

			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





- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use.
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.