Ordering number: EN4135

SANYO No.4135

2SA1855/2SC4837

PNP/NPN Epitaxial Planar Silicon Transistors

50V/4A Switing Applications

Applications

· Power supplies, relay drivers, lamp drivers.

Features

· Adoption of FBET and MBIT processes.
· Large allowable collector dissipation.
· Low saturation voltage.
· Wide ASO and large current capacity.
· Usage of radial taping to meet automatic mounting.

( ) : 2SA1855

Absolute Maximum Ratings at Ta = 25°C

			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	(−)4	A
Collector Current (Pulse)	I_{CP}	(−)6	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}=(−)40V, I_E=0			(−)1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(−)4V, I_C=0			(−)1	μA
DC Current Gain	$h_{FE}(1)$	V_{CE}=(−)2V, I_C=(−)100mA	100※		400※	
	$h_{FE}(2)$	V_{CE}=(−)2V, I_C=(−)3A	40			
Gain Bandwidth Product	f_T	V_{CE}=(−)10V, I_C=(−)50mA		150		MHz
Output Capacitance	C_{ob}	V_{CB}=(−)10V, f=1MHz		(39)25		pF

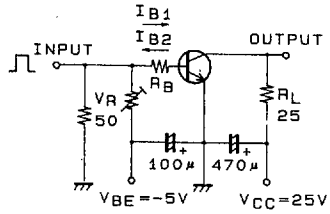
Continued on next page.

※ : The 2SA1855/2SC4837 are classified by 100mA h_{FE} as follows :

100 R 200	140 S 280	200 T 400

Switching Time Test Circuit

PW = 20μs
DC≦1%

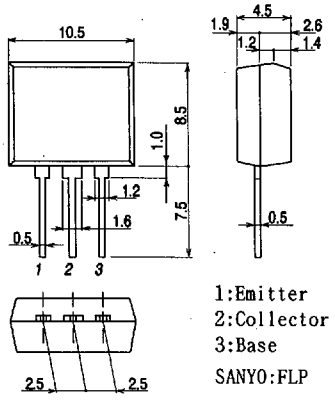


$I_C = 10I_B1 = -10I_B2 = 1A$ A00651

Unit (Resistance : Ω, Capacitance : F)

Package Dimensions 2084B

(unit:mm)



1:Emitter
2:Collector
3:Base
SANYO:FLP

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TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

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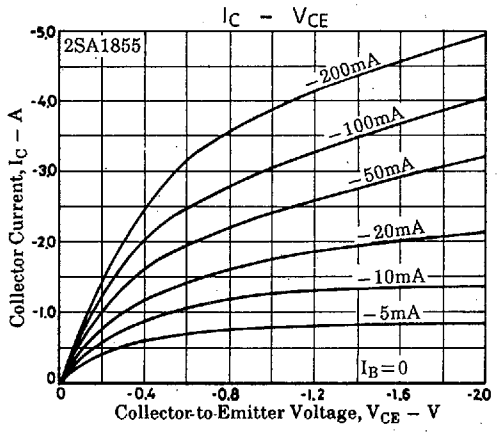
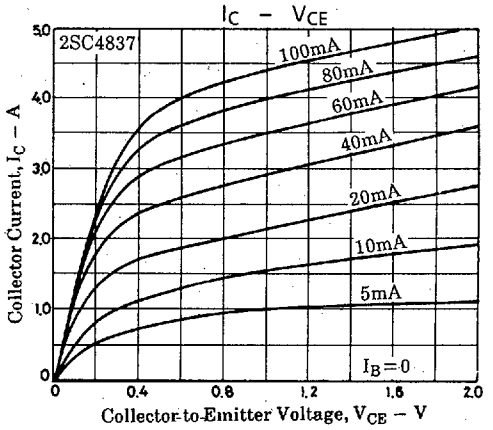
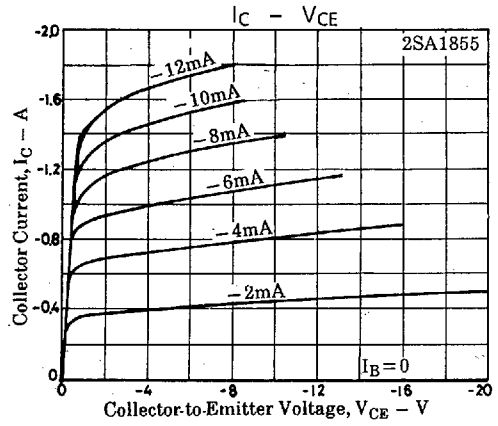
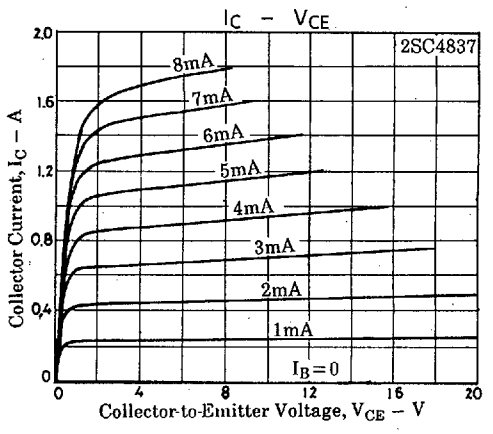
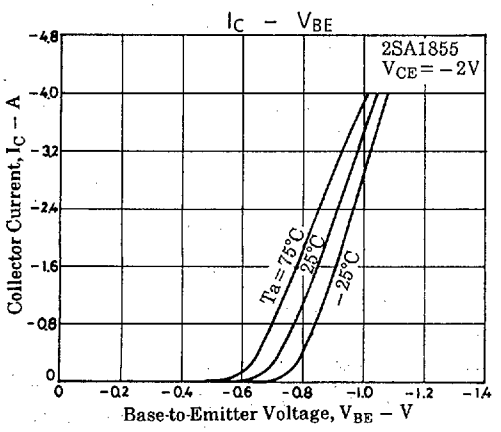
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)2A, I_B=(-)100mA$		$(-)350$	$(-)700$	mV
				190	500	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)2A, I_B=(-)100mA$		$(-)0.94$	$(-)1.2$	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	$(-)60$			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA, R_{BE}=\infty$	$(-)50$			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	$(-)6$			V
Turn ON Time	t_{on}	See specified Test Circuit.		70		ns
Storage Time	t_{stg}	〃		(450)650		ns
Fall Time	t_f	〃		(30)35		ns

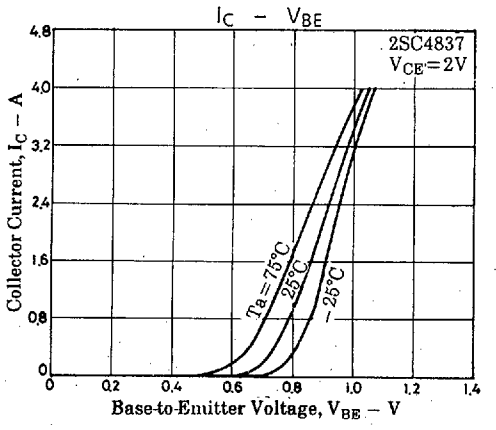




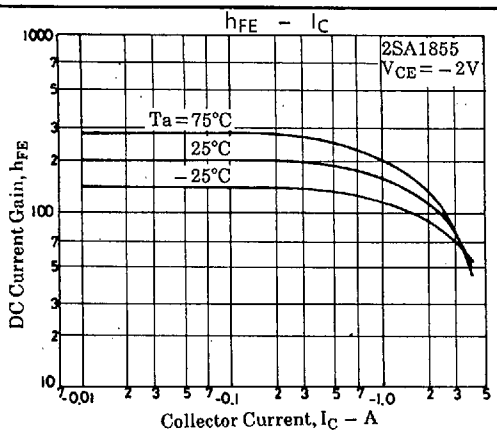




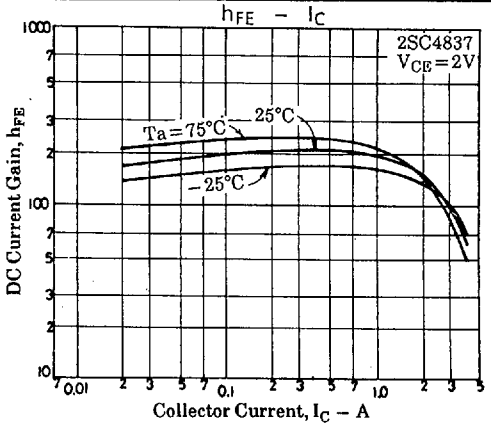




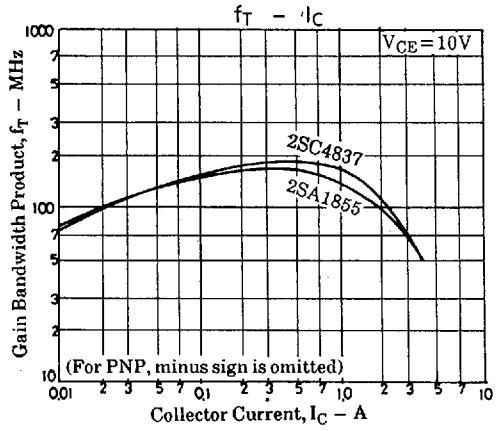
h_{FE} – I_C



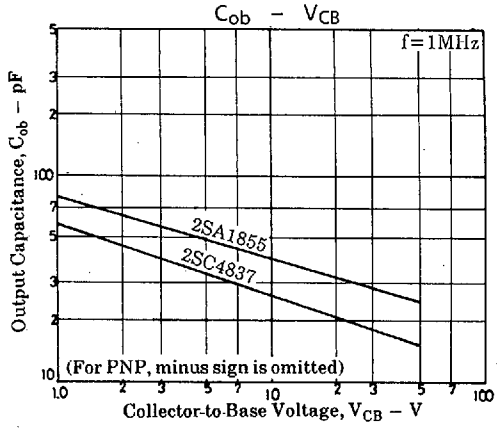
h_{FE} – I_C



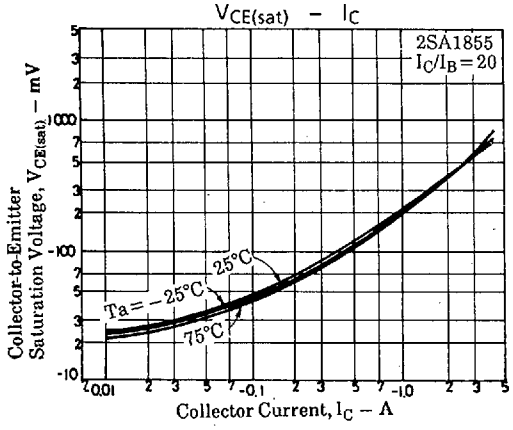
f_T – I_C



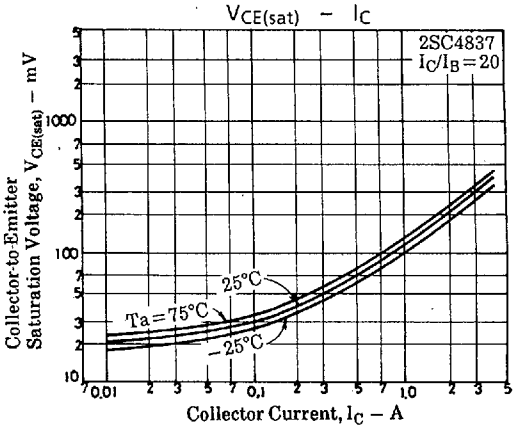
C_{ob} – V_{CB}



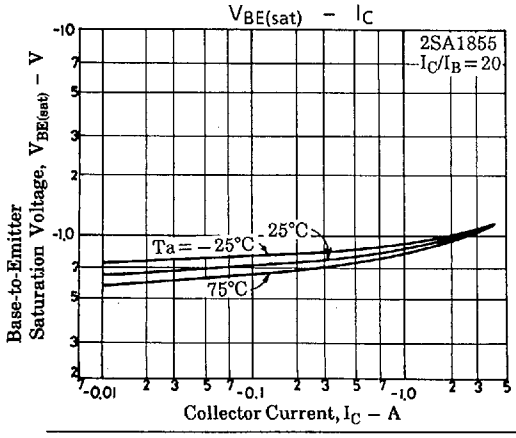
$V_{CE(sat)}$ – I_C



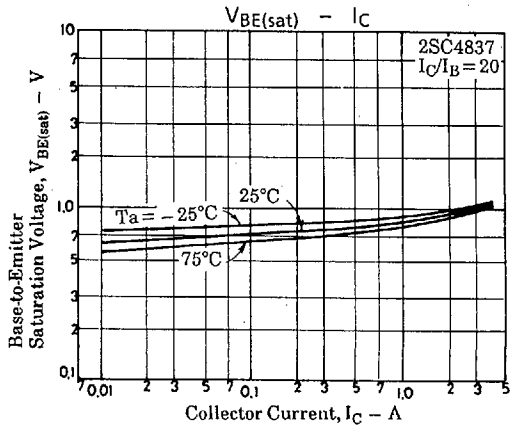
$V_{CE(sat)}$ – I_C



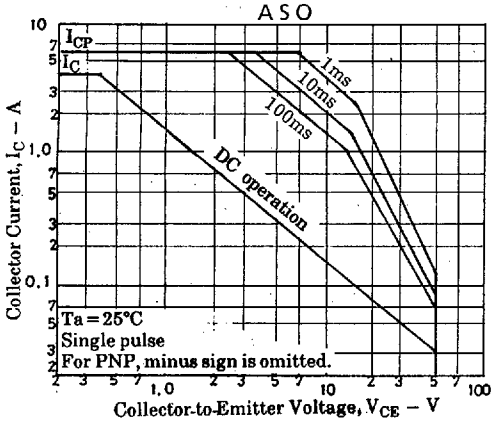
$V_{BE(sat)}$ – I_C



$V_{BE(sat)}$ – I_C



ASO



P_C – Ta