

SANYO	No.3879	2SA1827/2SC4731
		PNP/NPN Epitaxial Planar Silicon Transistors 100V/4A Switching Applications

Applications

- Relay drivers, high-speed inverters, converters, and other general high-current switching applications.

Features

- Low collector-to-emitter saturation voltage.
- High Gain-Bandwidth Product.
- Excellent linearity of DC Current Gain.
- Fast switching speed.

() : 2SA1827

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector-to-Base Voltage	V _{CB0}	(-)120	V
Collector-to-Emitter Voltage	V _{CEO}	(-)100	V
Emitter-to-Base Voltage	V _{EBO}	(-)6	V
Collector Current	I _C	(-)4	A
Collector Current (Pulse)	I _{CP}	(-)8	A
Base Current	I _B	(-)0.8	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} = (-)100V, 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} = (-)5V, I _C = (-)500mA	100*		400*	
	h _{FE} (2)	V _{CE} = (-)5V, I _C = (-)3A	40			
Gain-Bandwidth Product	f _T	V _{CE} = (-)10V, I _C = (-)500mA		(130)180		MHz
Output Capacitance	C _{ob}	V _{CB} = (-)10V, f = 1MHz		(65)40		pF

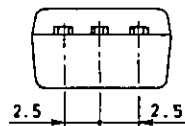
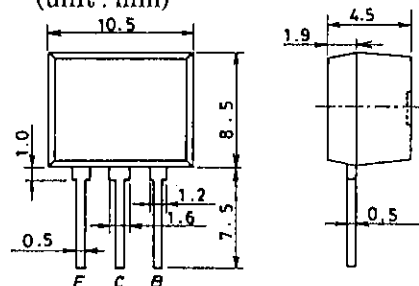
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* : The 2SA1827/2SC4731 are classified by 500mA h_{FE} as follows

100	R	200	140	S	280	200	T	400
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Package Dimensions 2084

(unit: mm)



E : Emitter
C : Collector
B : Base

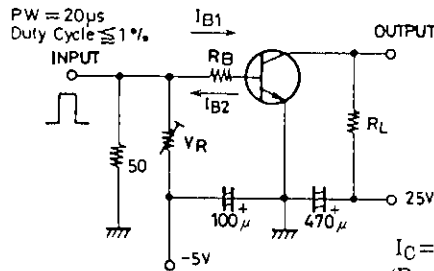
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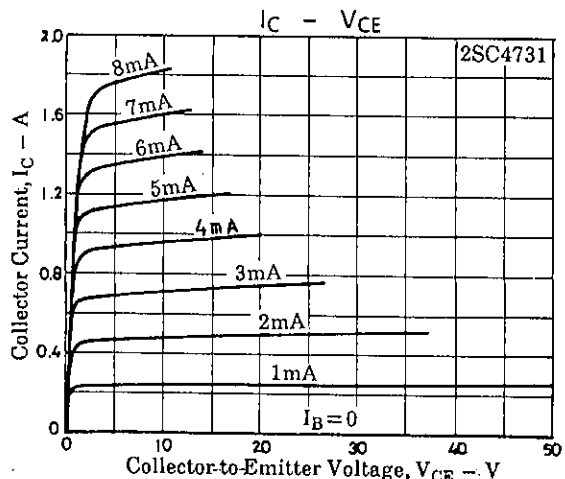
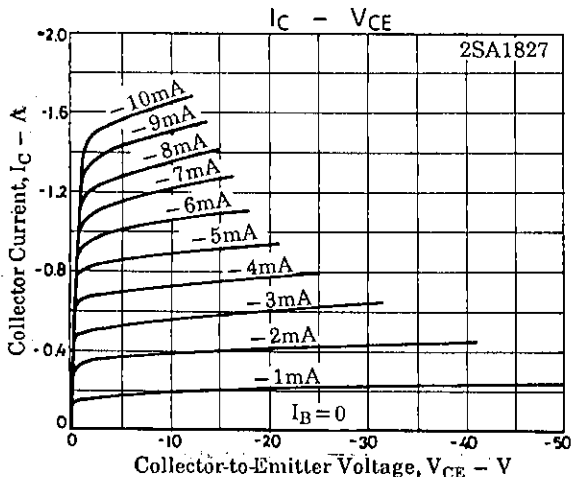
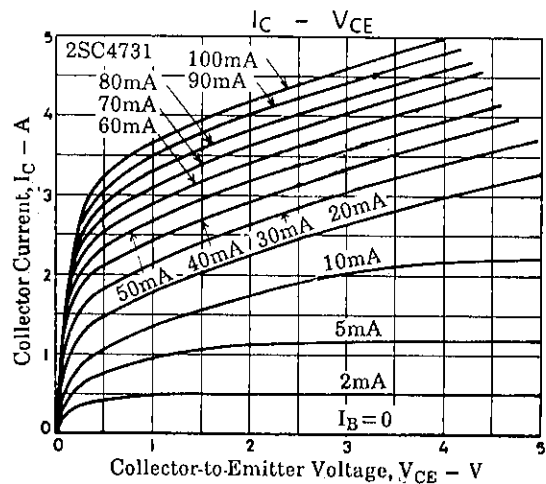
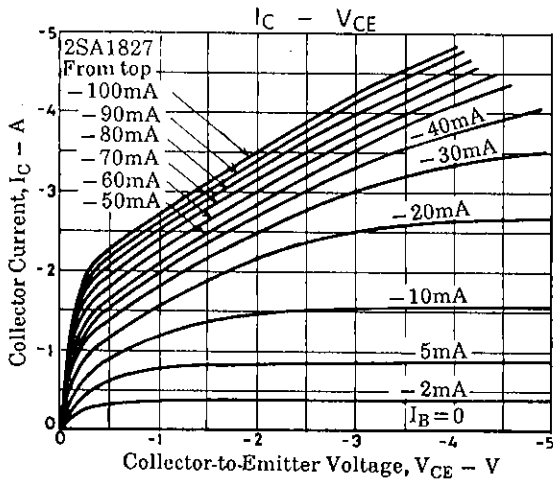
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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)2A, I_B = (-)0.2A$		(-200)	(-500)	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)2A, I_B = (-)0.2A$		150	400	mV
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-)	120		V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)	100		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.		100		ns
Storage Time	t_{stg}	"		(800)900		ns
Fall Time	t_f	"		50		ns

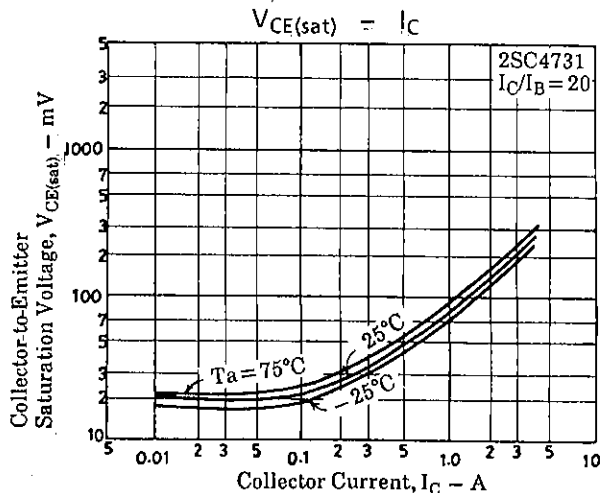
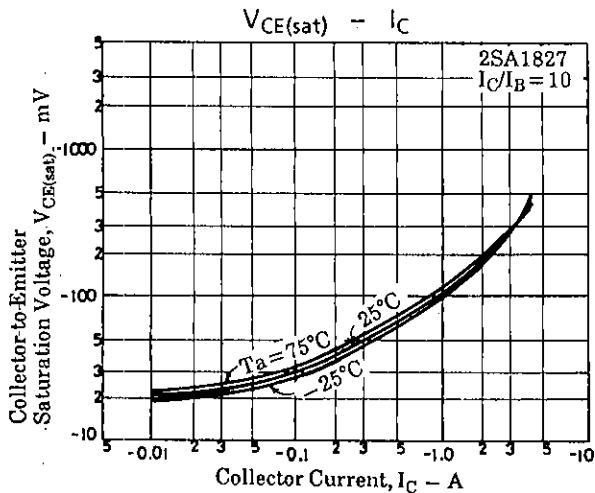
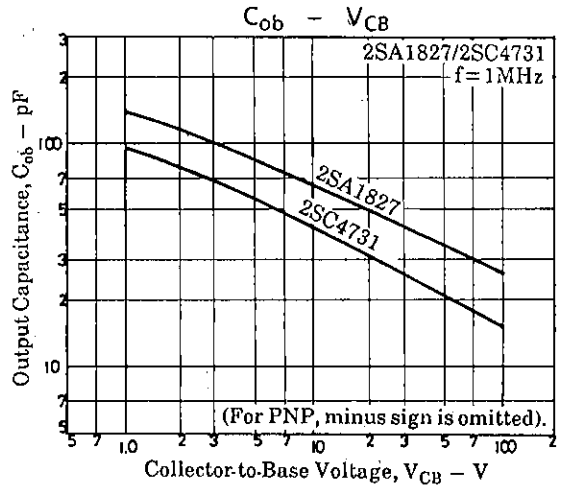
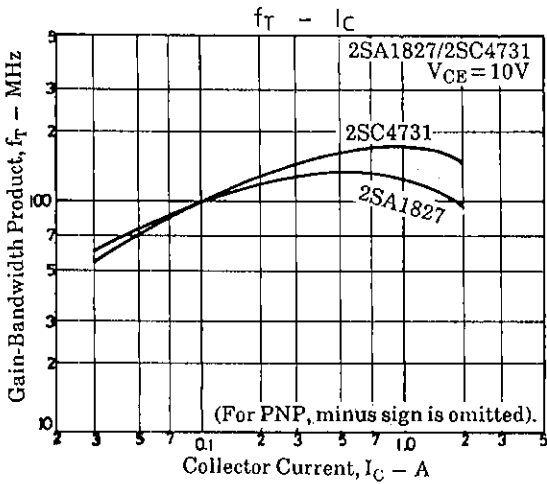
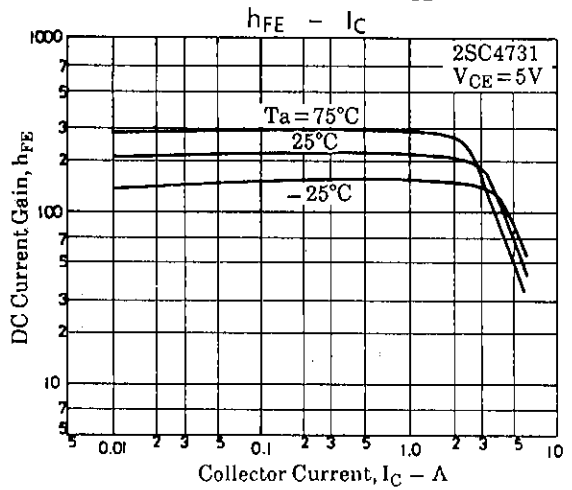
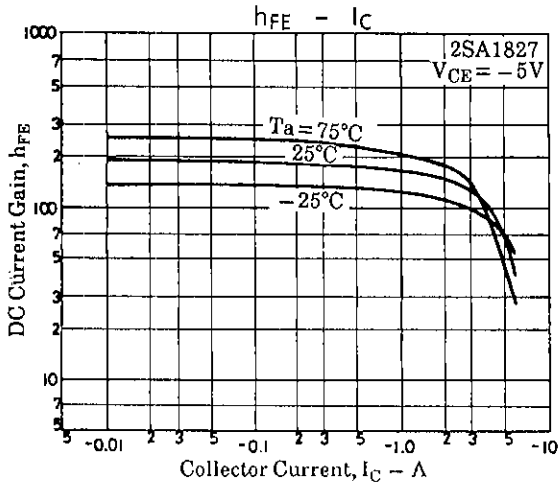
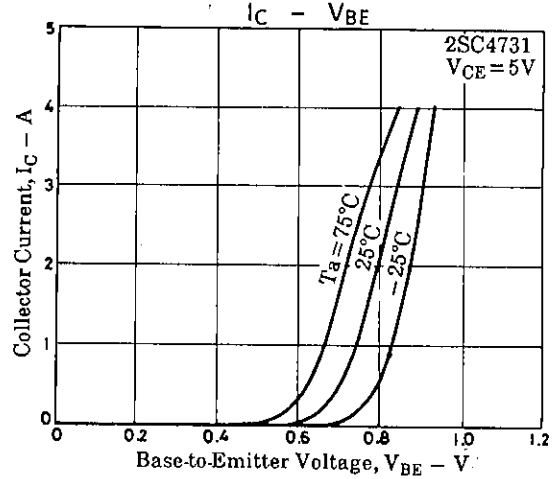
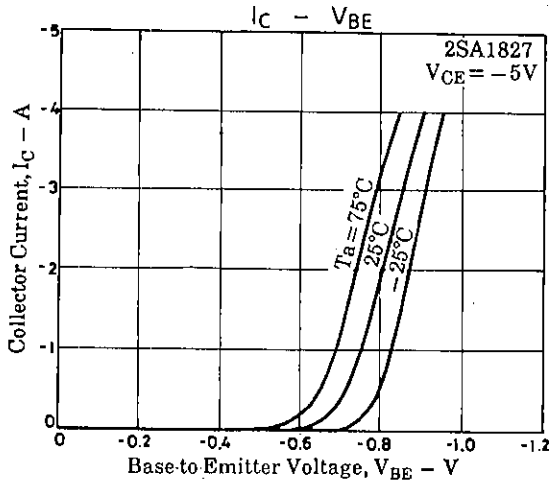
Switching Time Test Circuit



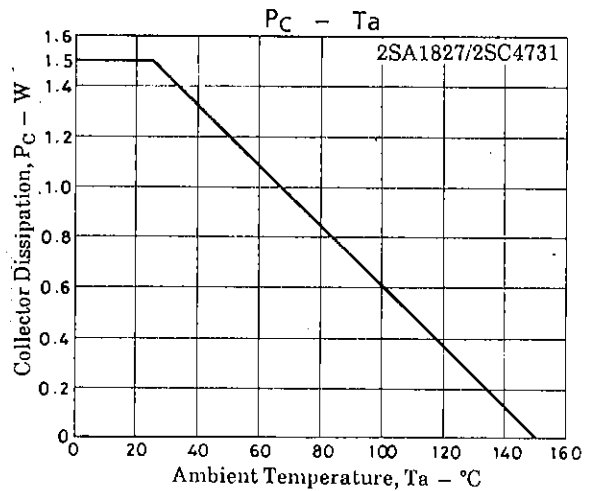
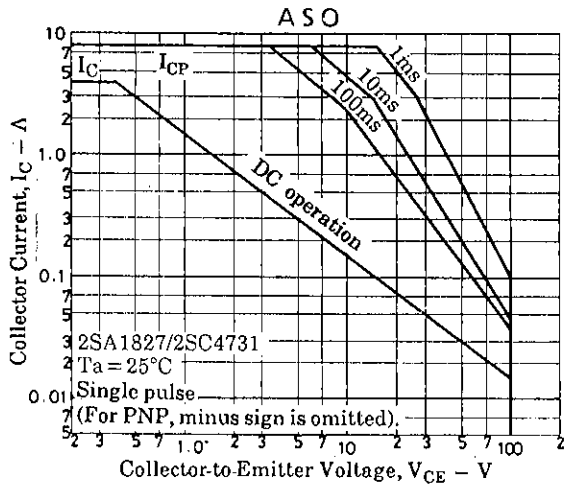
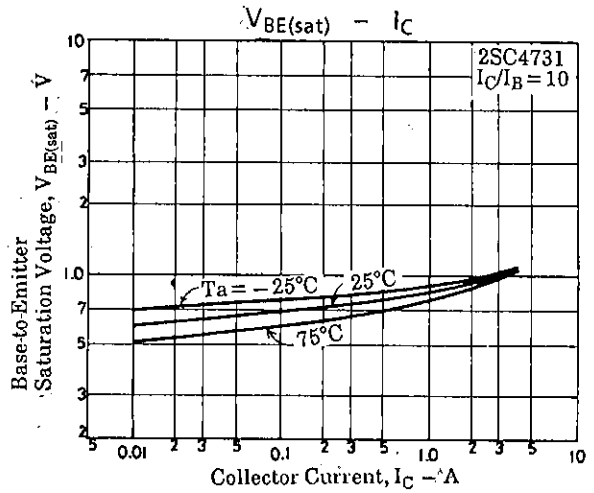
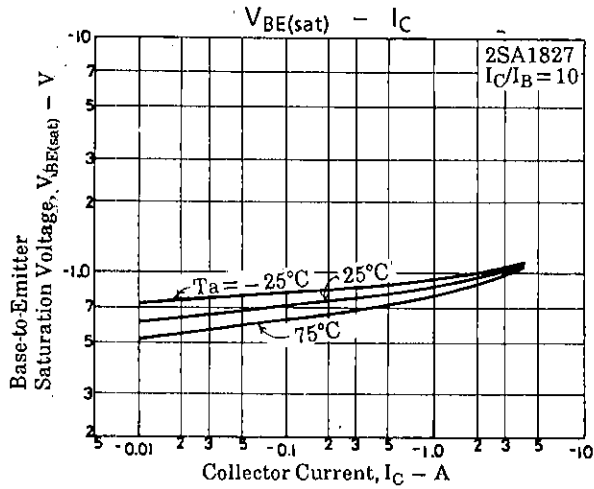
Unit (resistance: Ω , capacitance: F)



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