

SANYO	No.3877	2SA1825/2SC4729
		PNP/NPN Epitaxial Planar Silicon Transistors 50V/8A 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.

(): 2SA1825

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Collector-to-Base Voltage	V_{CB0}	(-) 60	V
Collector-to-Emitter Voltage	V_{CEO}	(-) 50	V
Emitter-to-Base Voltage	V_{EBO}	(-) 6	V
Collector Current	I_C	(-) 8	A
Collector Current (Pulse)	I_{CP}	(-) 12	A
Base Current	I_B	(-) 2	A
Collector Dissipation	P_C	1.5	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to $+150$	$^\circ\text{C}$

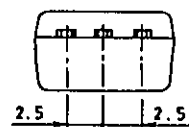
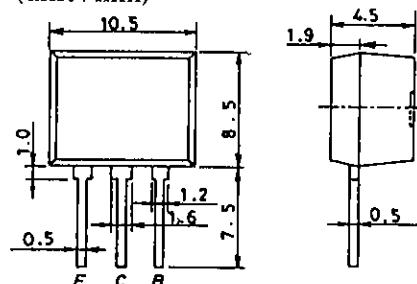
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB} = (-)40\text{V}, I_E = 0$			(-) 1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0$			(-) 1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = (-)2\text{V}, I_C = (-)0.5\text{A}$	100^*		400^*	
	$h_{FE(2)}$	$V_{CE} = (-)2\text{V}, I_C = (-)6\text{A}$	35			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5\text{V}, I_C = (-)1\text{A}$		$(130)180$		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		$(95)65$		pF

* : The 2SA1825/2SC4729 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

SANYO: FLF

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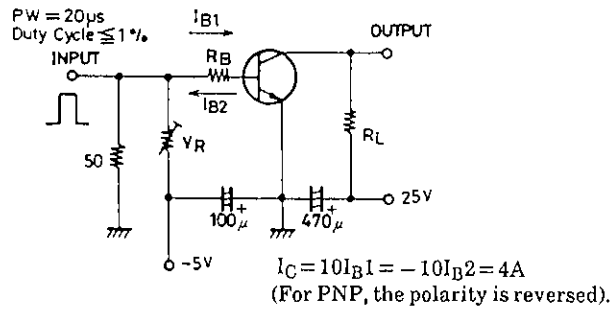
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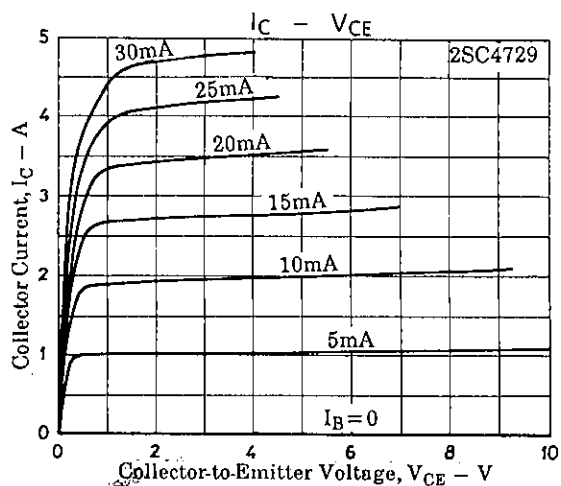
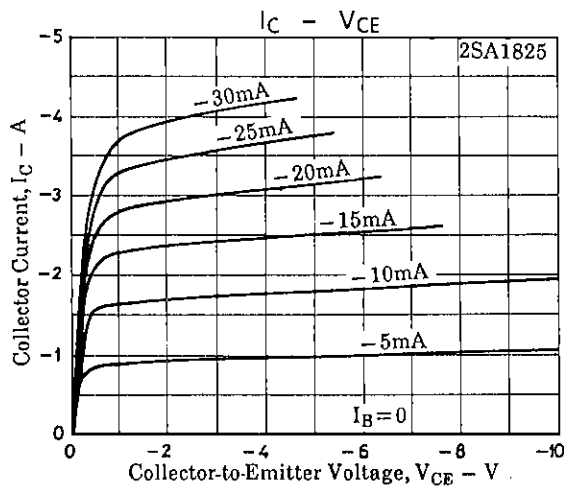
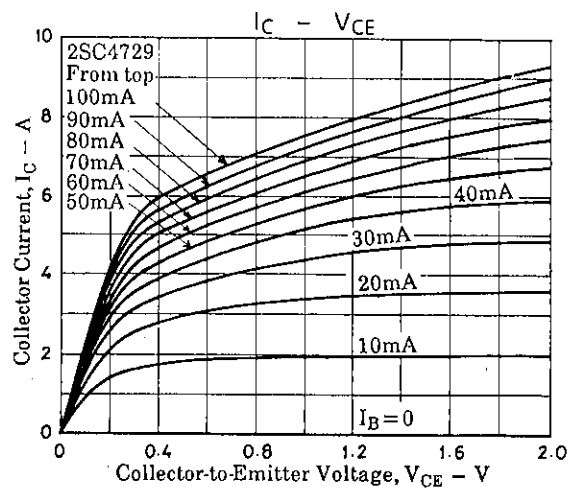
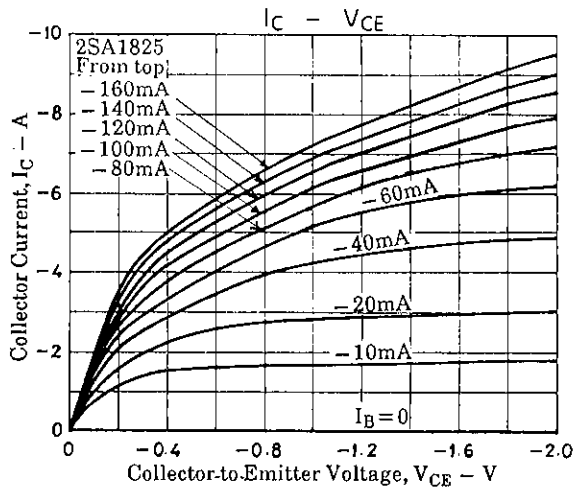
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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)4A, I_B = (-)0.2A$		(-250)	(-500)	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)4A, I_B = (-)0.2A$		200	400	mV
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-60)			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.		50		ns
Storage Time	t_{stg}	"		(450)500		ns
Fall Time	t_f	"		20		ns

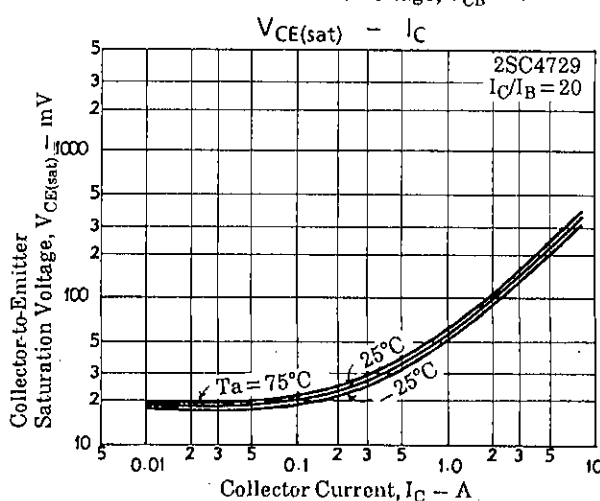
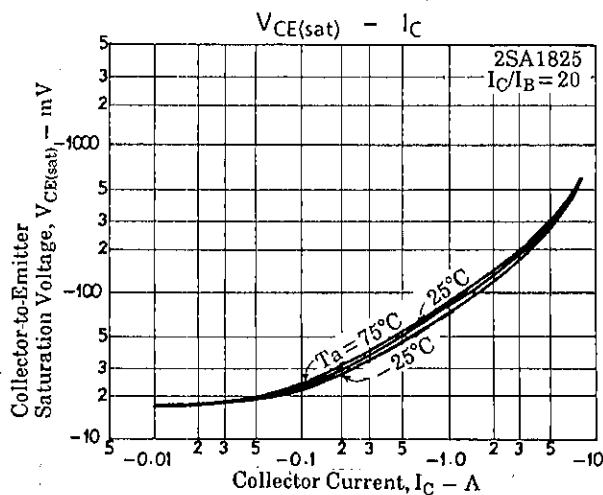
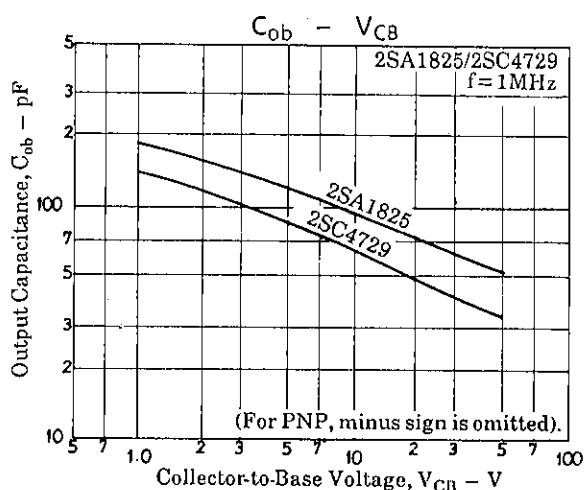
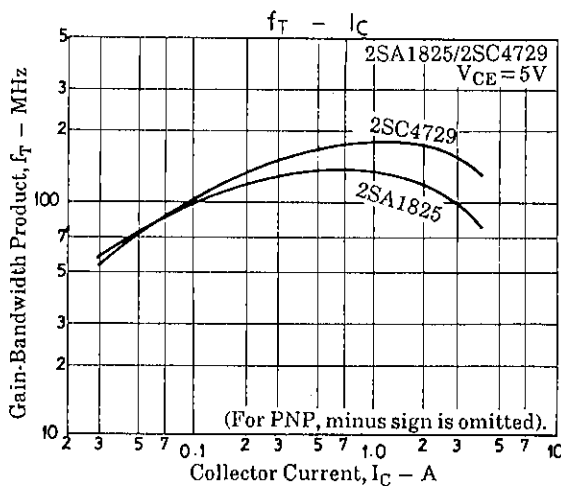
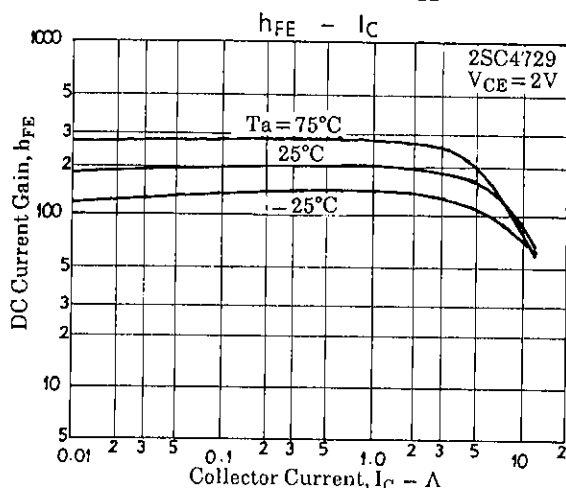
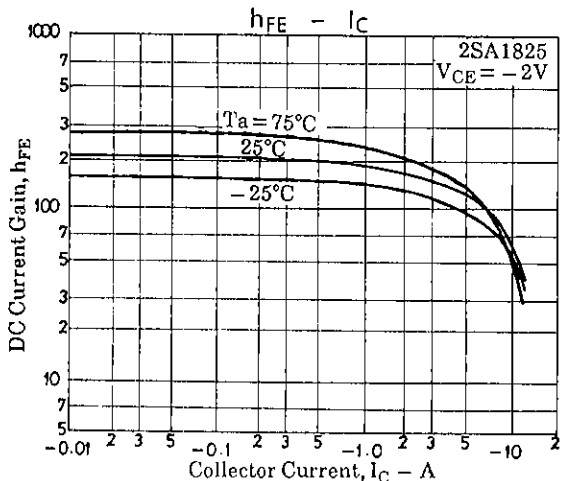
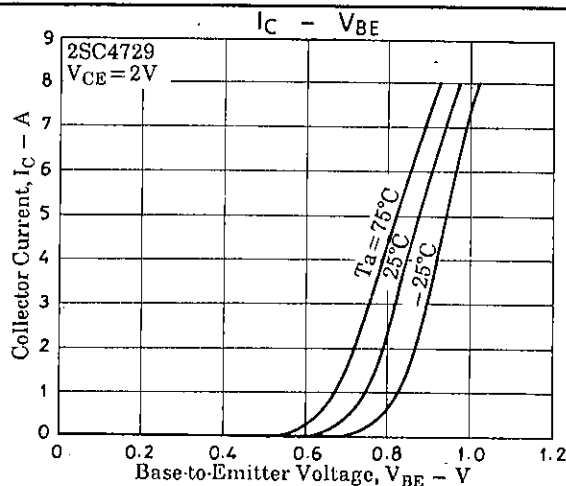
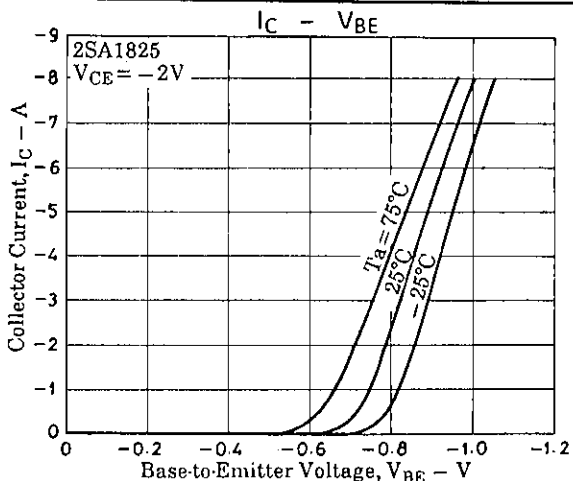
Switching Time Test Circuit



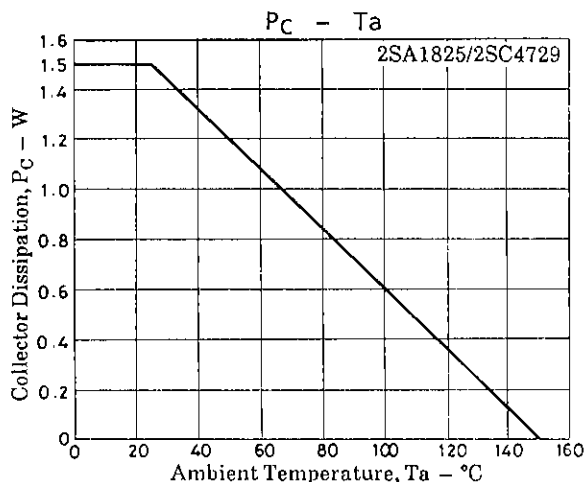
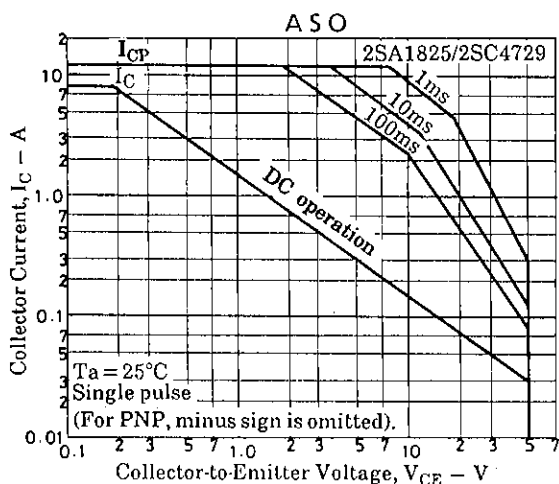
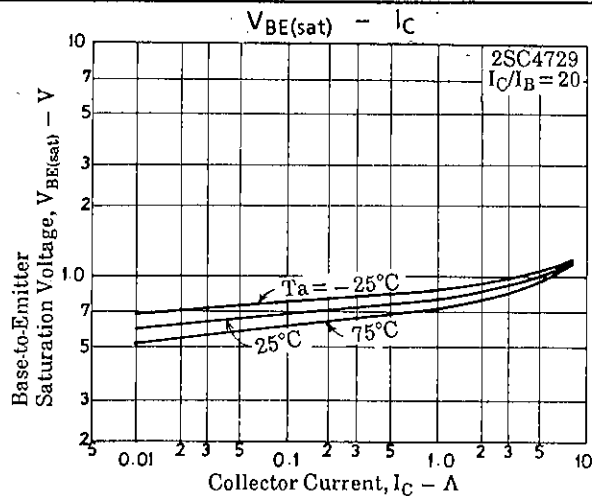
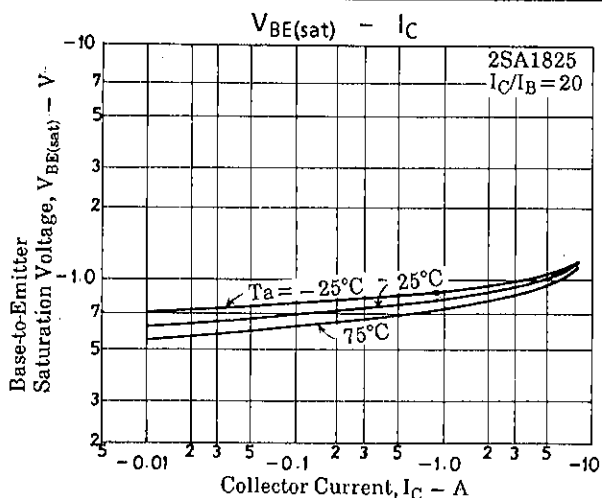
Unit (resistance: Ω , capacitance: F)



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