

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 Ta = 25°C

			unit
Collector-to-Base Voltage	V_{CB0}	(-) 60	V
Collector-to-Emitter Voltage	V_{CE0}	(-) 50	V
Emitter-to-Base Voltage	V_{EB0}	(-) 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	°C
Storage Temperature	T_{stg}	-55 to $+150$	°C

Electrical Characteristics at Ta = 25°C

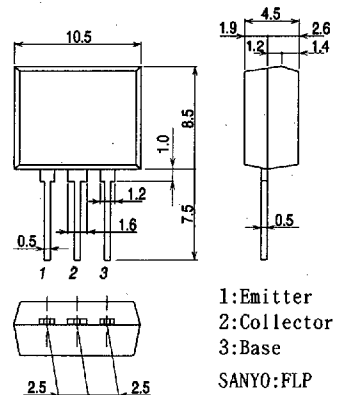
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			(-) 1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-) 1	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = (-)2V, I_C = (-)0.5A$	100^*		400^*	
	$h_{FE}(2)$	$V_{CE} = (-)2V, I_C = (-)6A$	35			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		$(130)180$		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)10V, f = 1MHz$		$(95)65$		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 2084B

(unit: mm)

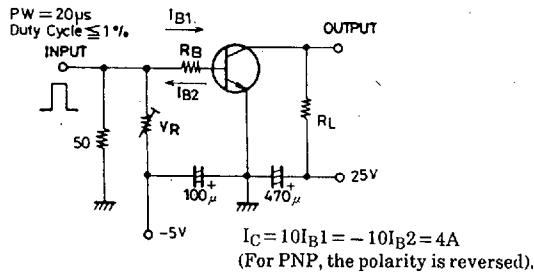


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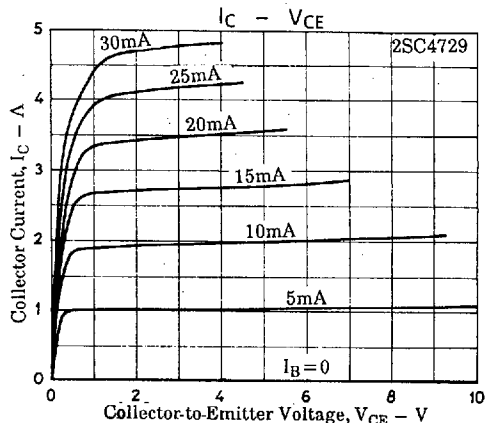
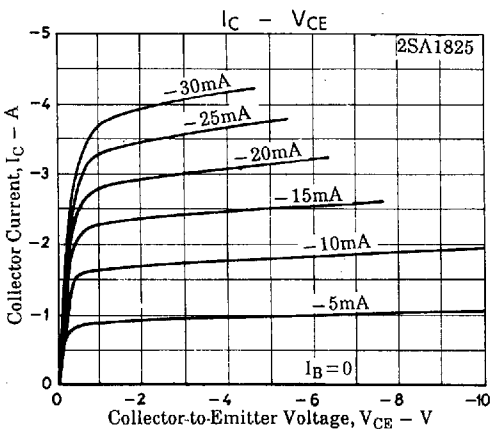
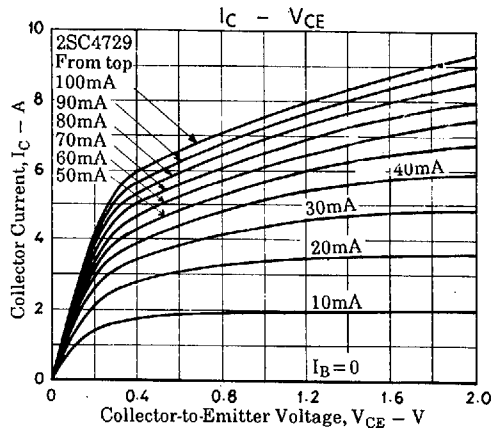
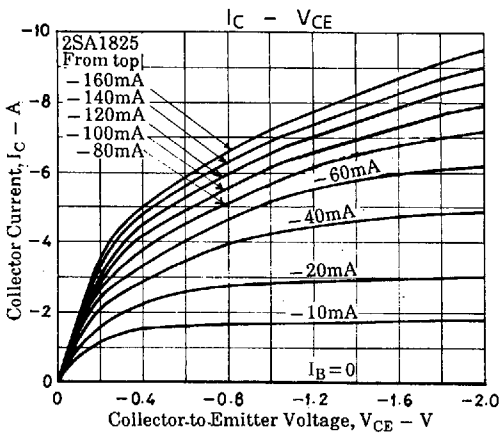
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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)4A, I_B = (-)0.2A$		(-250)	(-500)	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)4A, I_B = (-)0.2A$		200	400	mV
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-60)			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

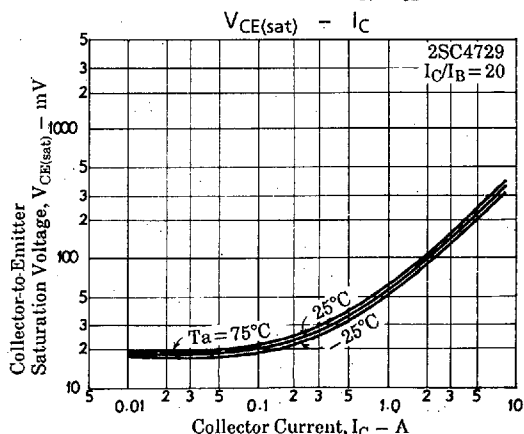
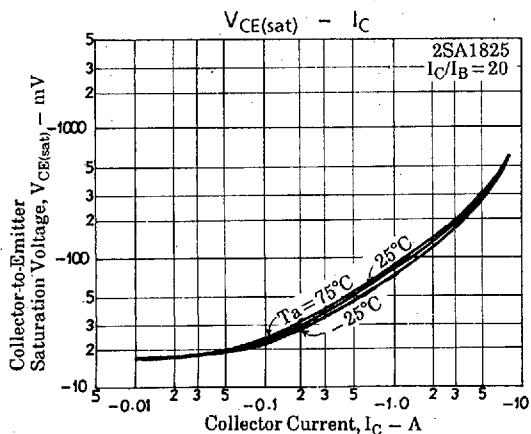
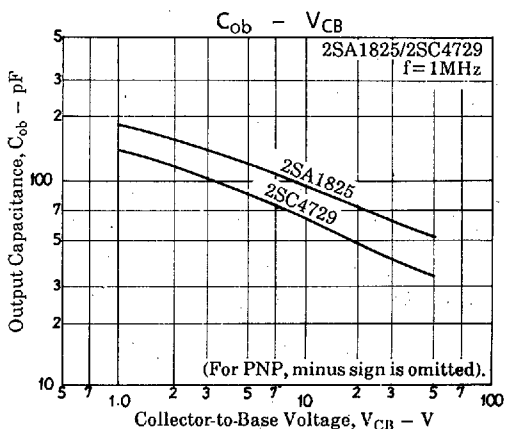
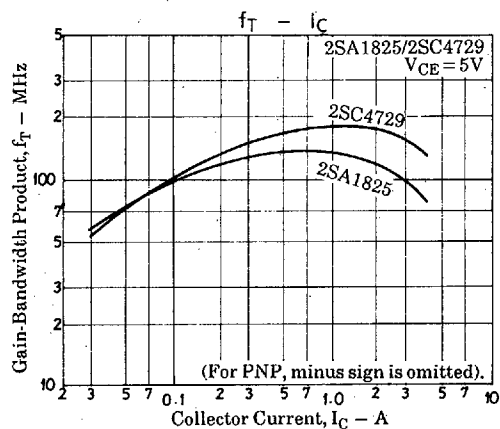
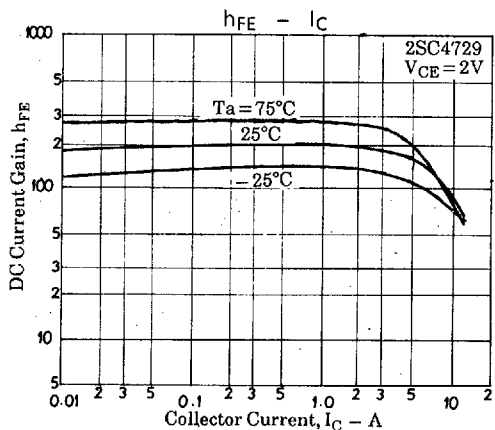
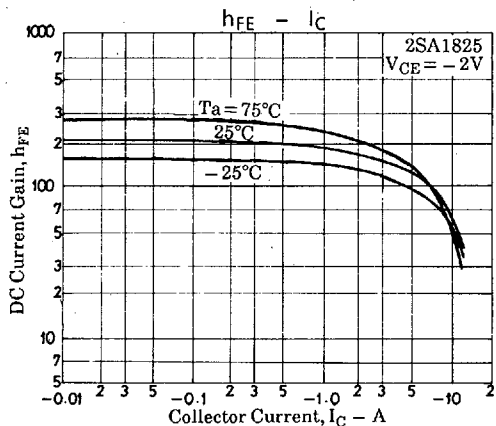
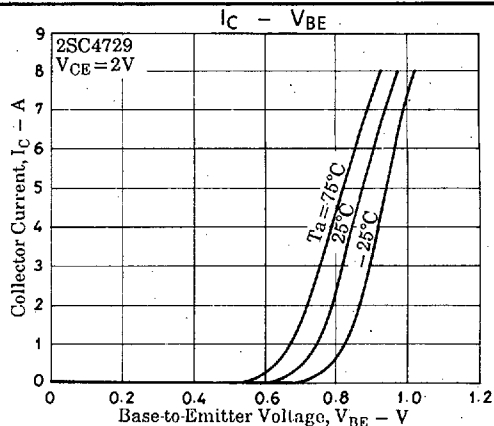
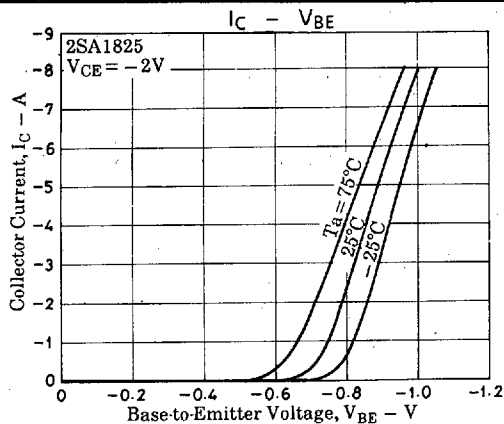
Switching Time Test Circuit



Unit (resistance : Ω , capacitance : F)



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