

<b>SANYO</b>	No.3877	<b>2SA1825/2SC4729</b>
		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	$^\circ\text{C}$

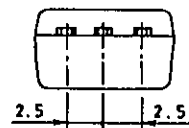
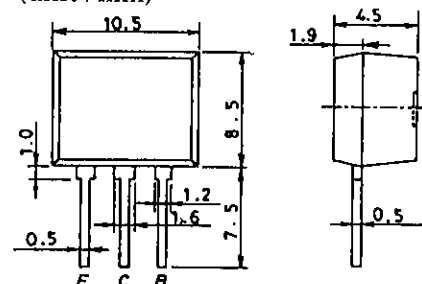
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$** 

			min	typ	max	unit
Collector Cutoff Current	$I_{CB0}$	$V_{CB} = (-)40\text{V}, I_E = 0$			(-)1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)1	$\mu\text{A}$
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: FLP

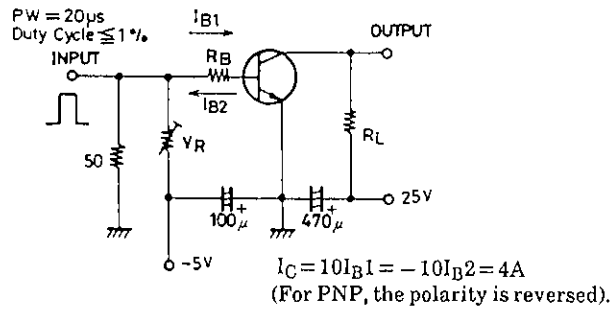
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## 2SA1825/2SC4729

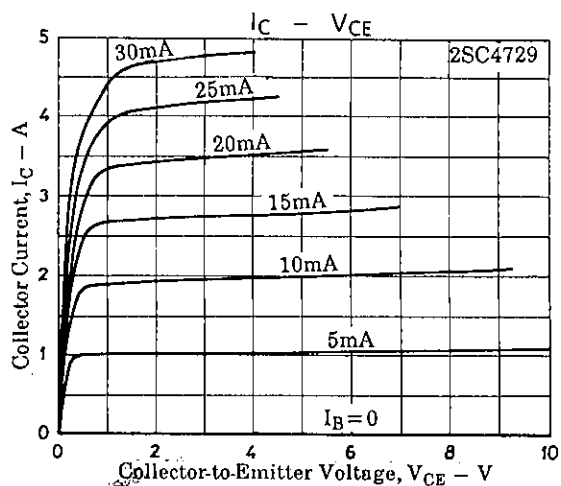
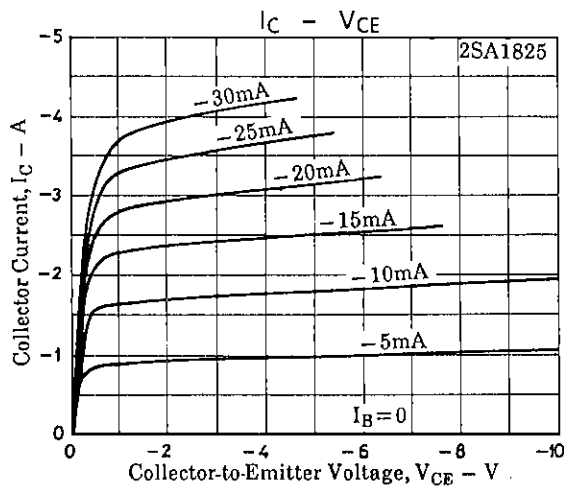
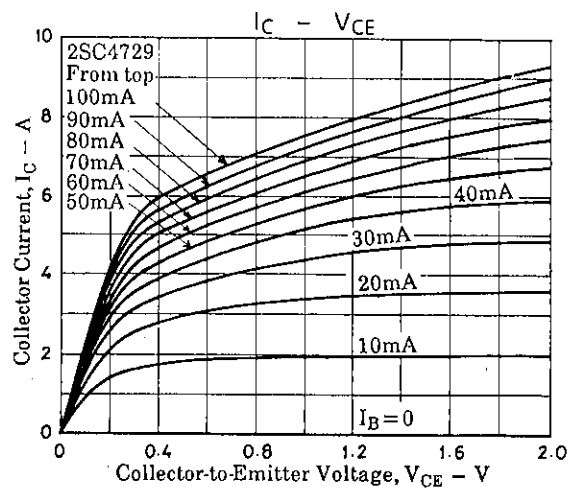
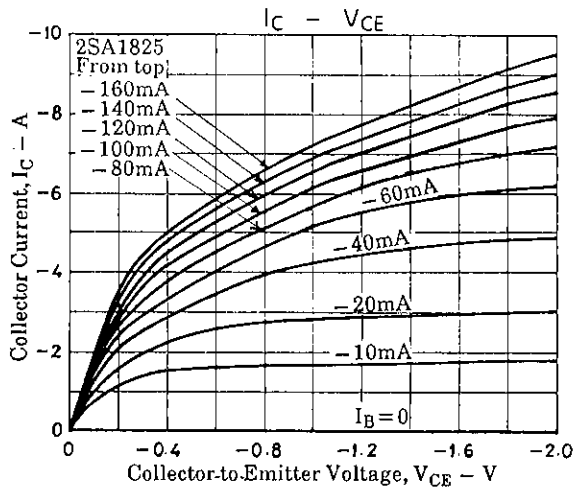
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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)4A, I_B = (-)0.2A$		(-250)	(-500)	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)4A, I_B = (-)0.2A$		200	400	mV
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-60)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

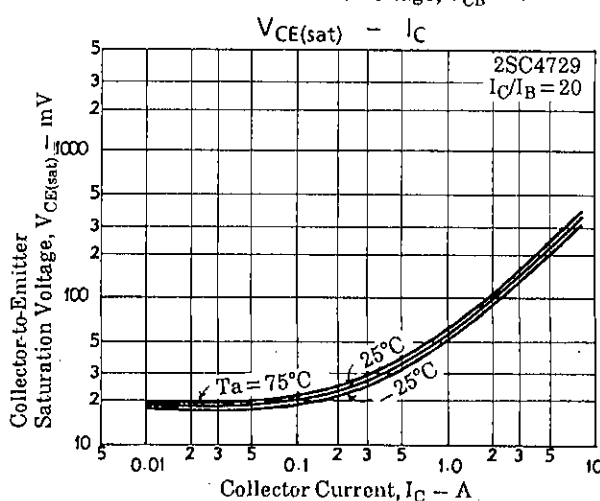
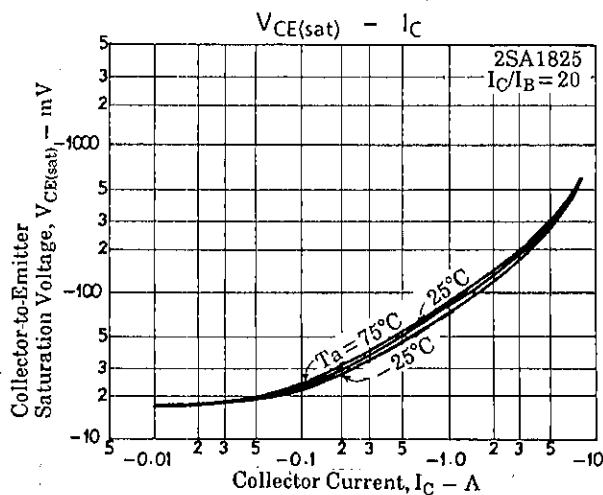
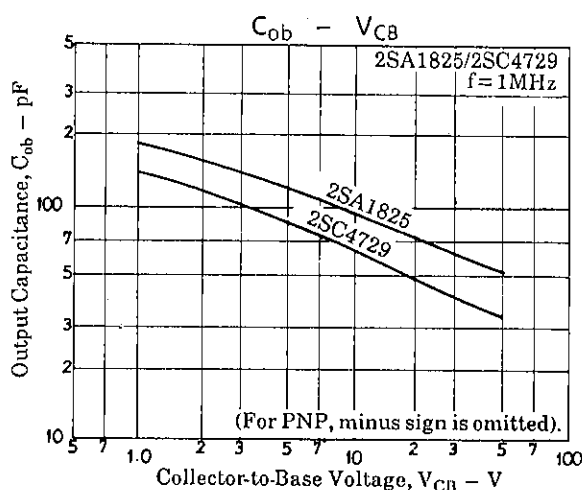
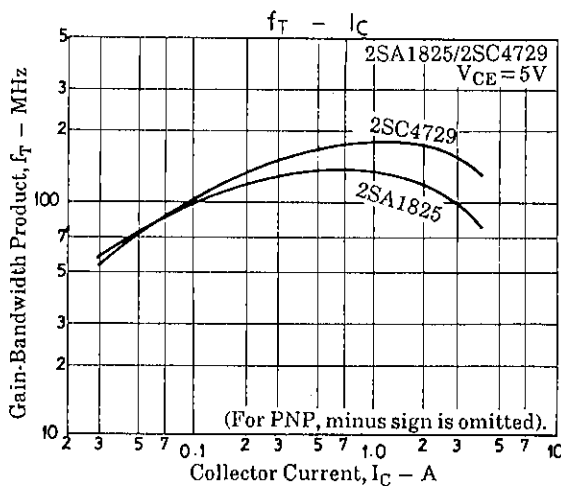
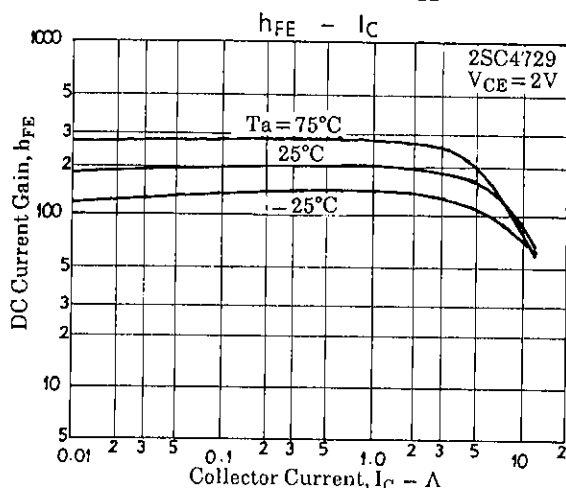
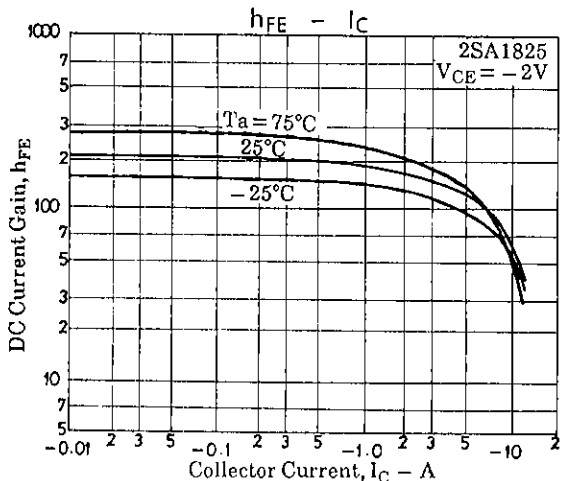
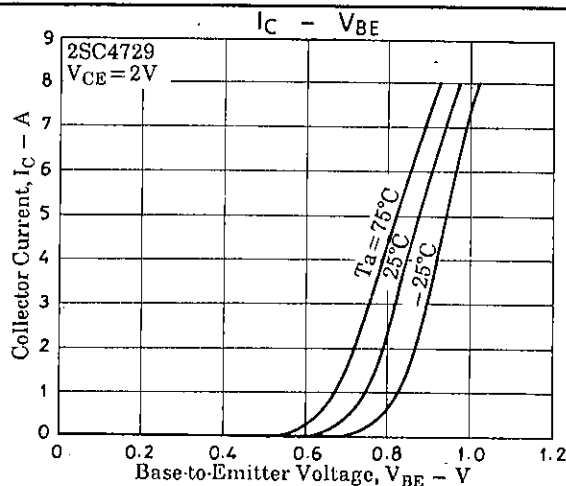
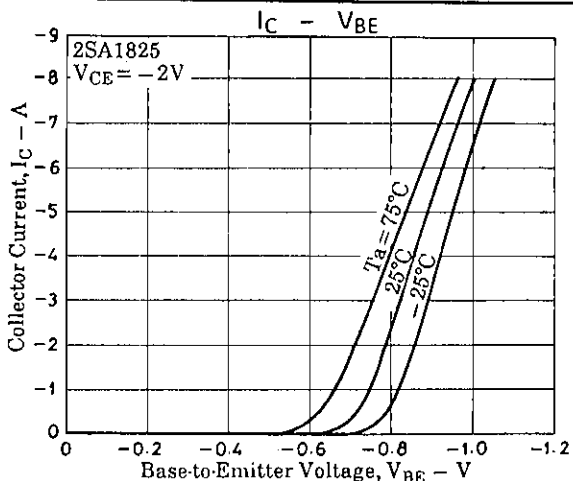
### Switching Time Test Circuit



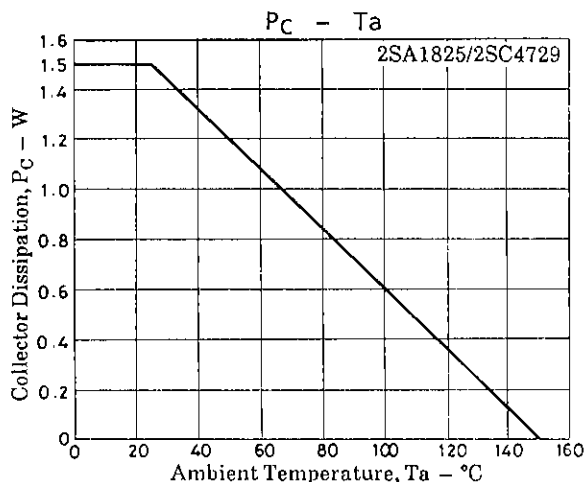
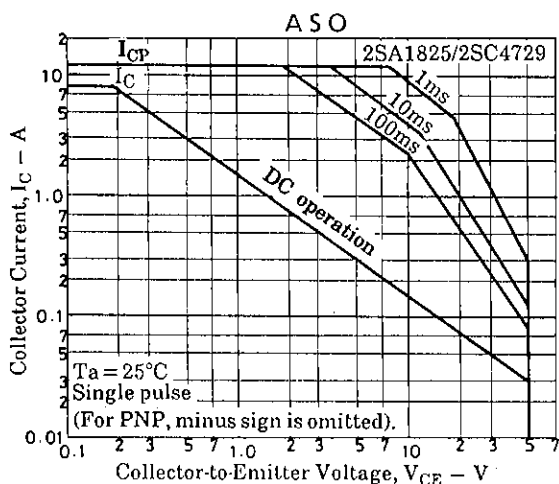
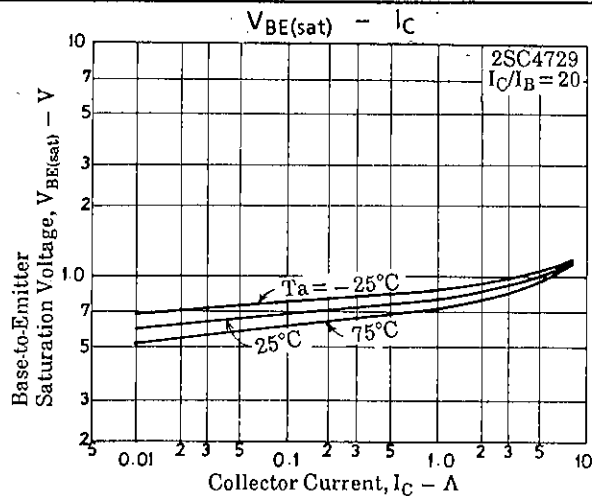
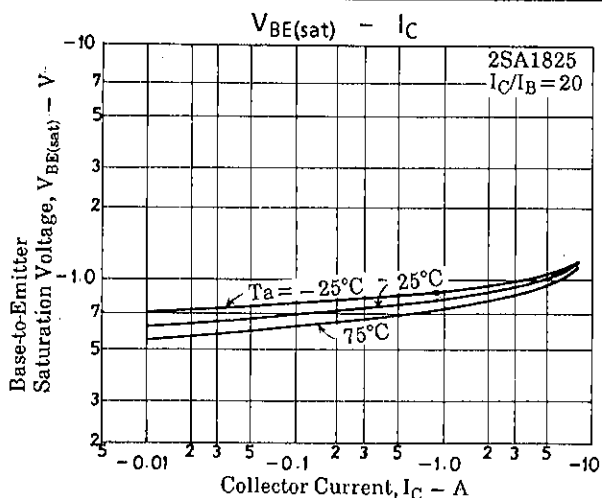
Unit (resistance:  $\Omega$ , capacitance: F)



2SA1825/2SC4729



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