

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 _{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	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics at Ta = 25°C

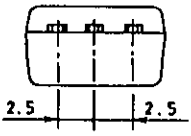
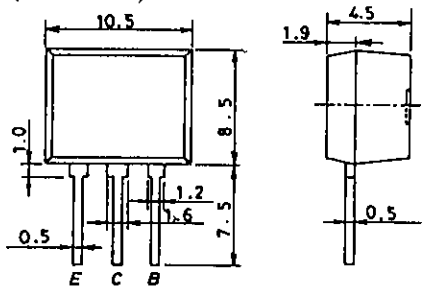
			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} = (-)40V, I _E = 0			(-)1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = (-)4V, I _C = 0			(-)1	μA
DC Current Gain	h _{FE} (1)	V _{CE} = (-)2V, I _C = (-)0.5A	100*		400*	
	h _{FE} (2)	V _{CE} = (-)2V, I _C = (-)6A	35			
Gain-Bandwidth Product	f _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 2084
(unit : mm)



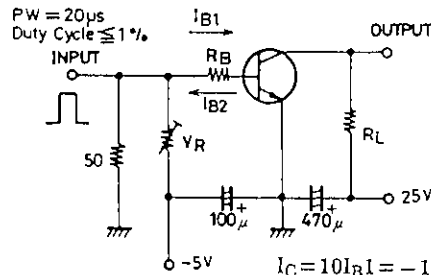
E : Emitter
C : Collector
B : Base

SANYO: FLP

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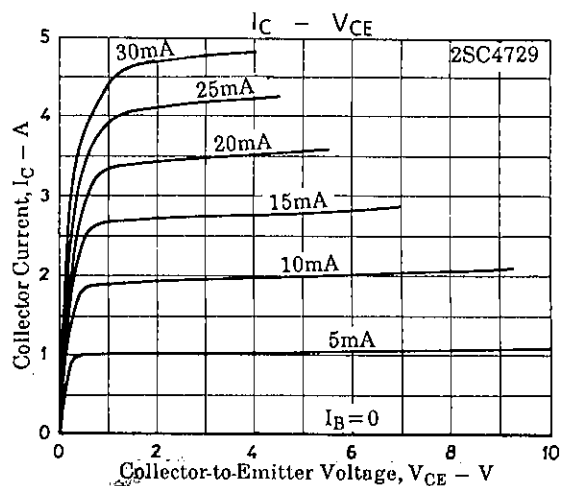
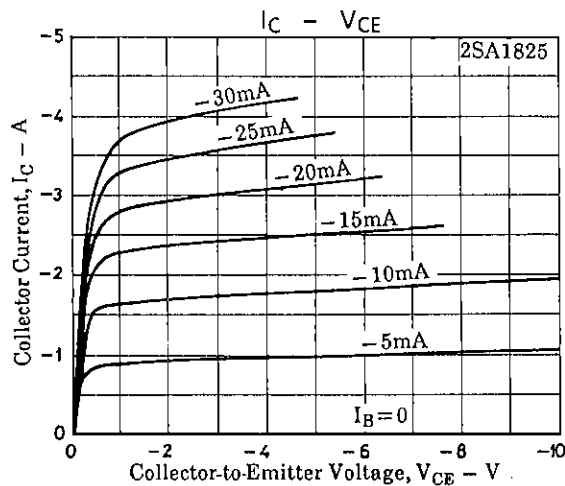
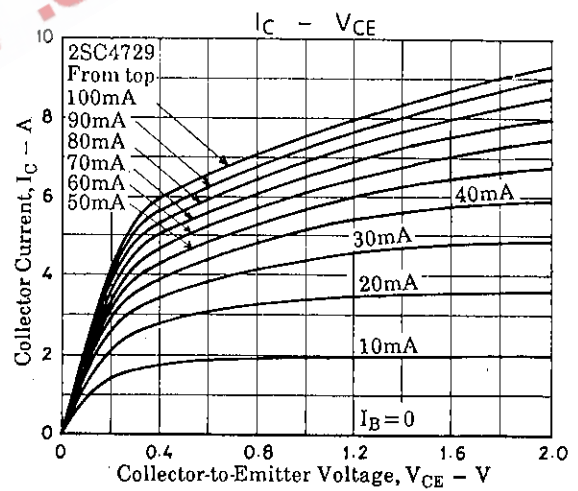
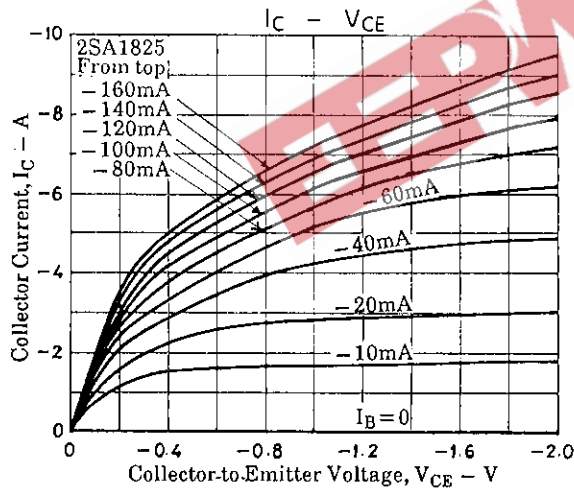
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)4A, I_B = (-)0.2A$		(-250)	(-500)	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)4A, I_B = (-)0.2A$		200	400	mV
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-60)			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-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

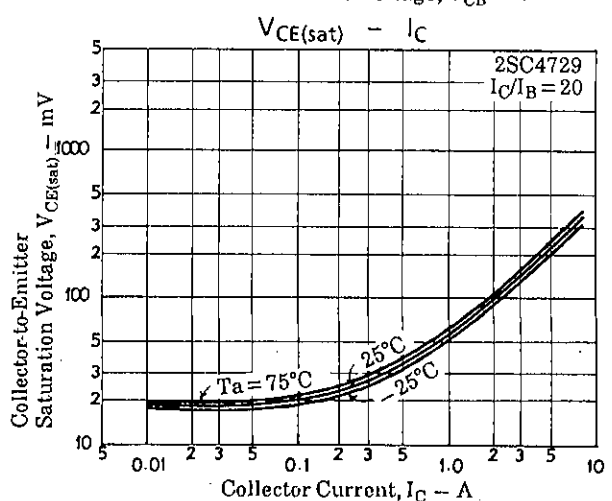
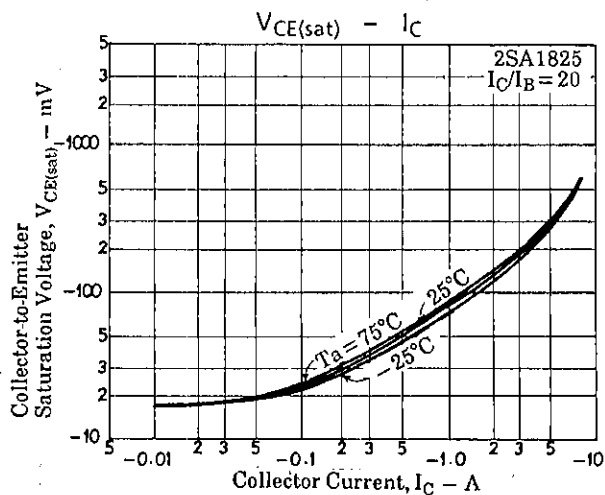
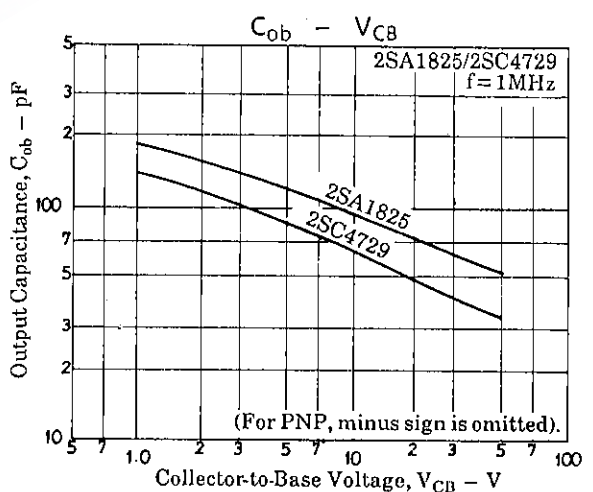
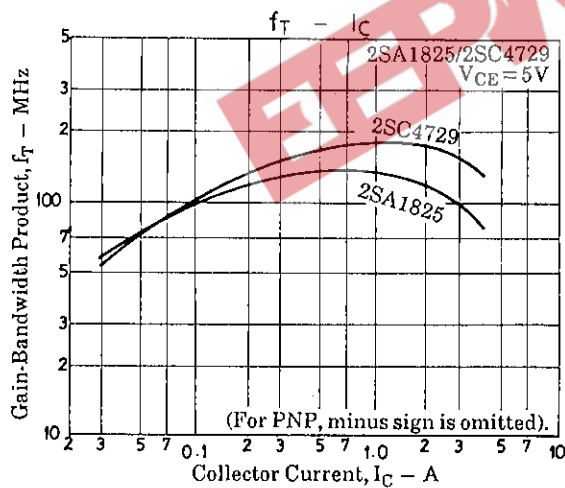
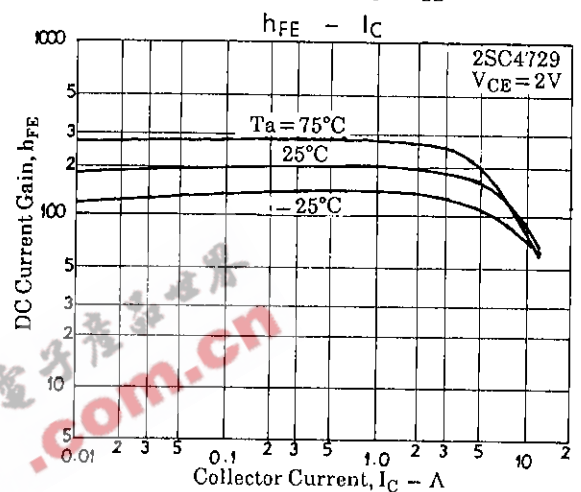
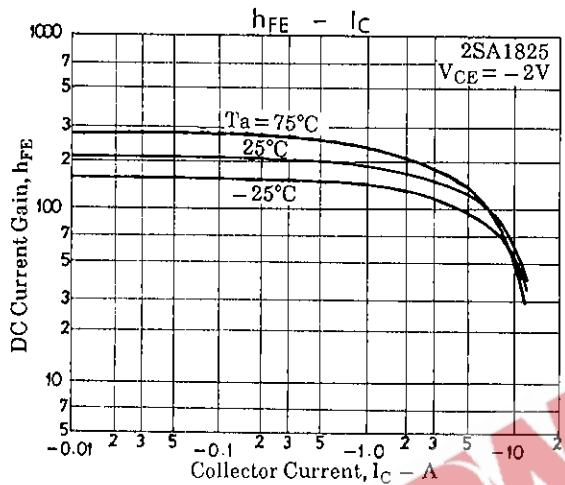
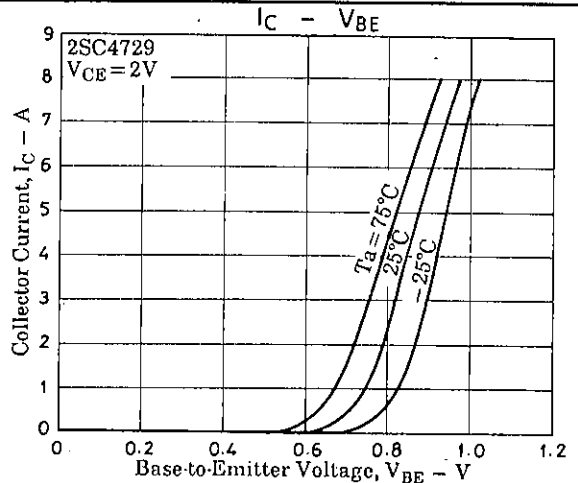
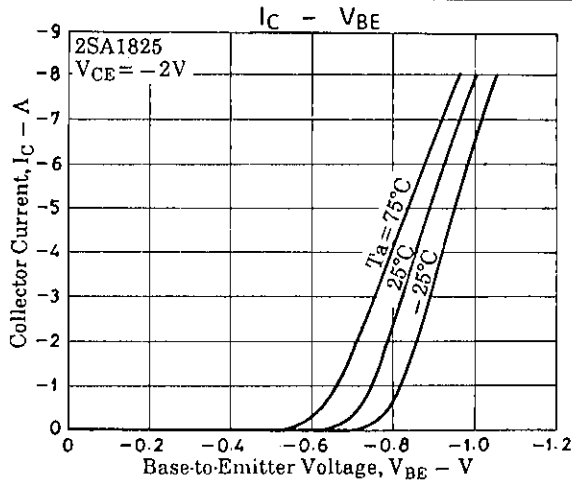


$I_C = 10I_{B1} = -10I_{B2} = 4A$
(For PNP, the polarity is reversed).

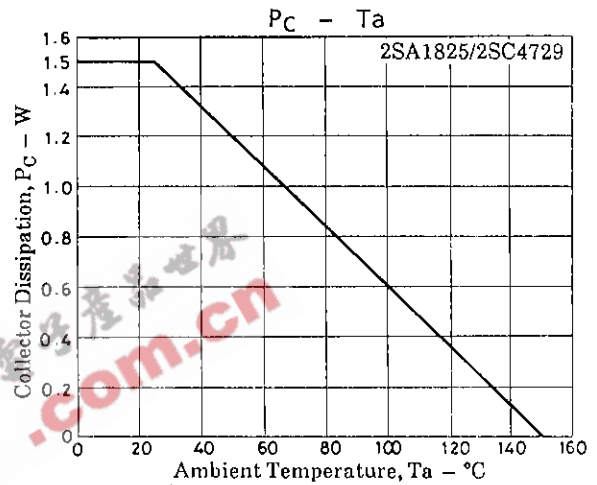
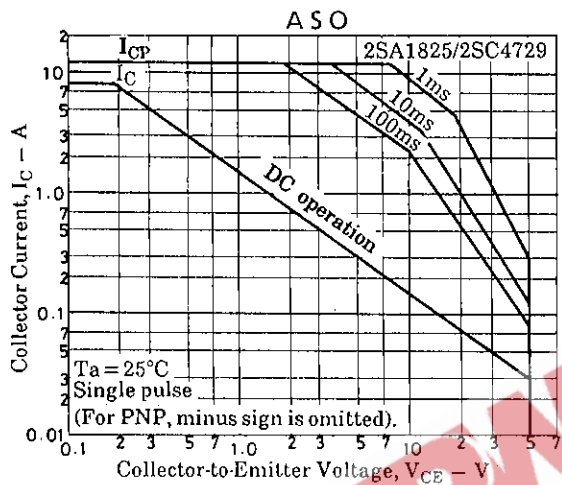
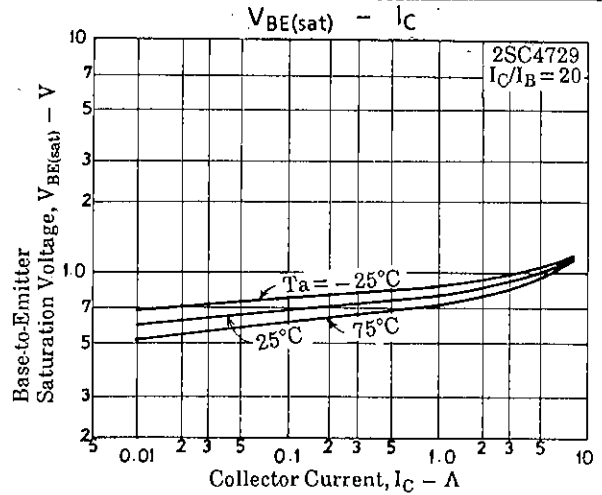
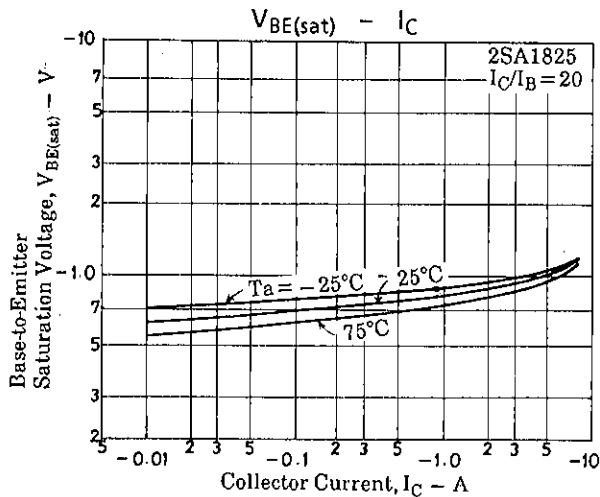
Unit (resistance: Ω , capacitance: F)



2SA1825/2SC4729



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