

SANYO	No.3872	2SA1824/2SC4728
		PNP/NPN Epitaxial Planar Silicon Transistors 50V/5A 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.

() : 2SA1824

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector-to-Base Voltage	V _{CB0}	(-)60	V
Collector-to-Emitter Voltage	V _{CEO}	(-)50	V
Emitter-to-Base Voltage	V _{EB0}	(-)6	V
Collector Current	I _C	(-)5	A
Collector Current (Pulse)	I _{CP}	(-)8	A
Base Current	I _B	(-)1	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

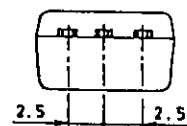
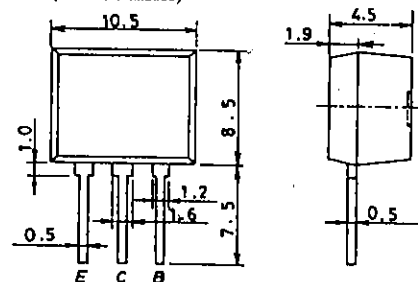
			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} = (-)40V, I _E = 0			(-)1	μA
Emitter Cutoff Current	I _{EB0}	V _{EB} = (-)4V, I _C = 0			(-)1	μA
DC Current Gain	h _{FE} (1)	V _{CE} = (-)2V, I _C = (-)500mA	100*		400*	
	h _{FE} (2)	V _{CE} = (-)2V, I _C = (-)4A	35			
Gain-Bandwidth Product	f _T	V _{CE} = (-)5V, I _C = (-)1A	(130)180			MHz
Output Capacitance	C _{ob}	V _{CB} = (-)10V, f = 1MHz	(60)40			pF

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* : The 2SA1824/2SC4728 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

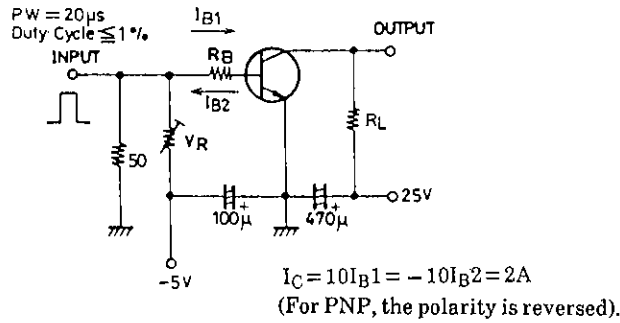
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2SA1824/2SC4728

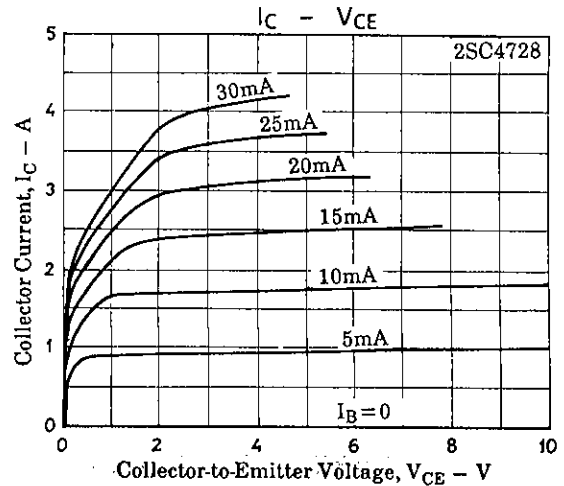
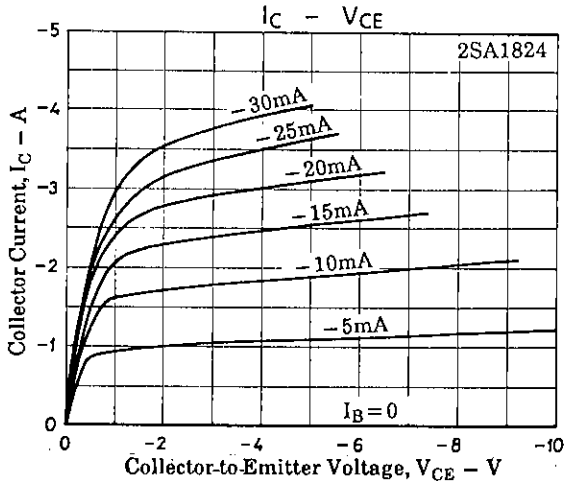
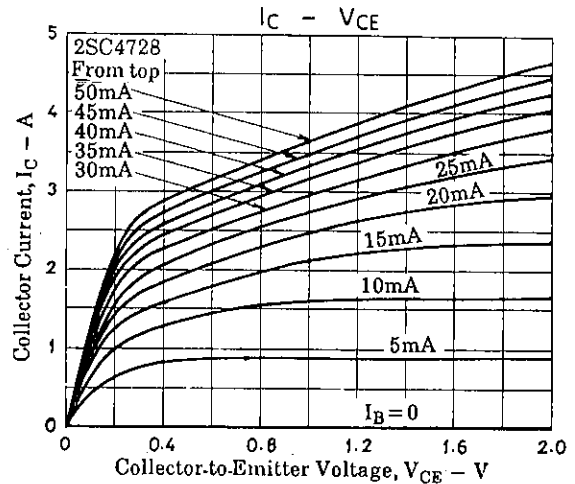
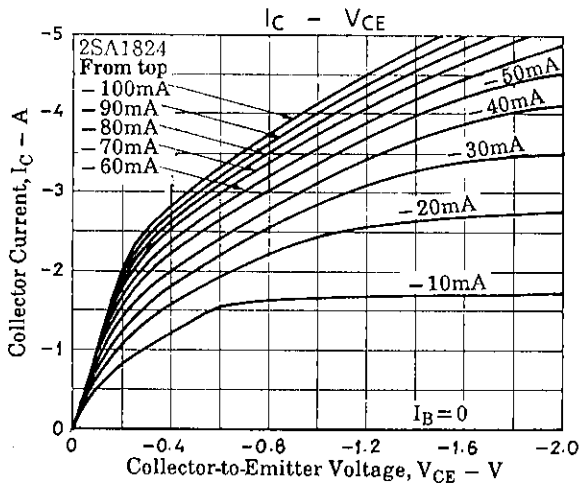
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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)3A, I_B = (-)0.15A$		(-280)	(-550)	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)3A, I_B = (-)0.15A$		220	400	mV
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-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

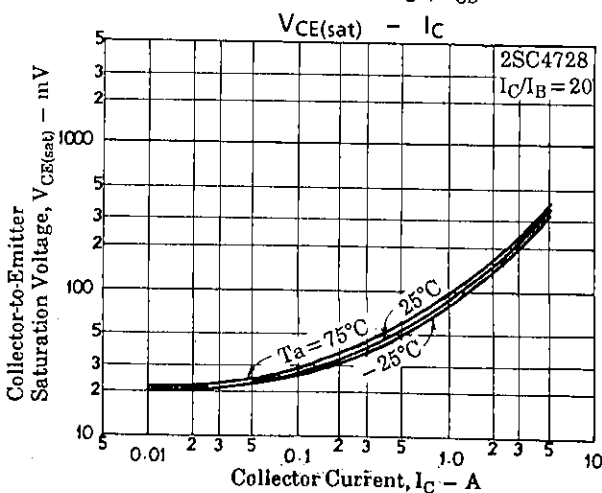
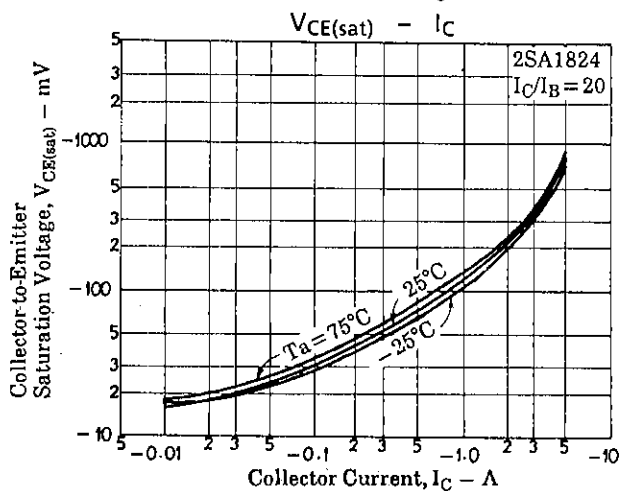
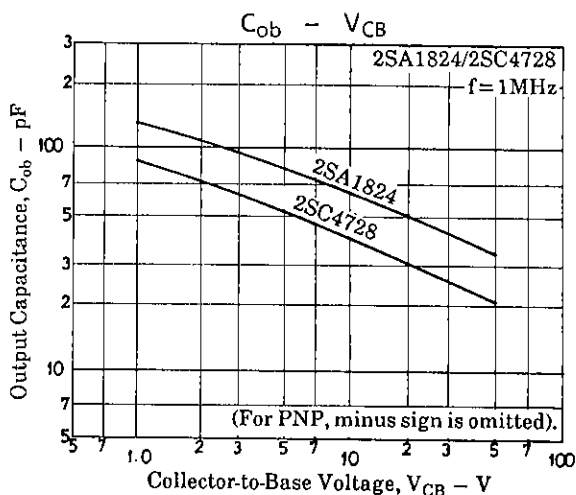
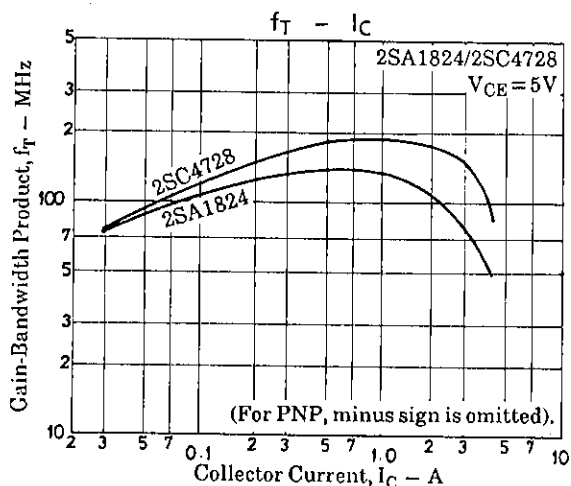
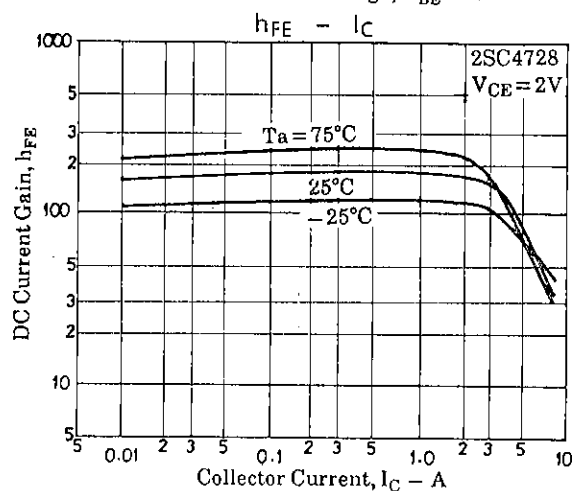
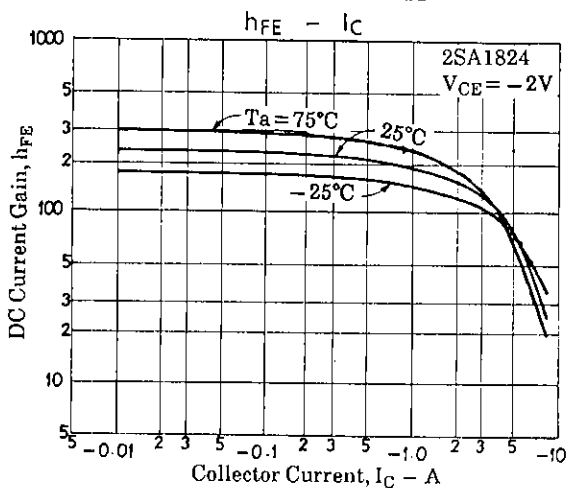
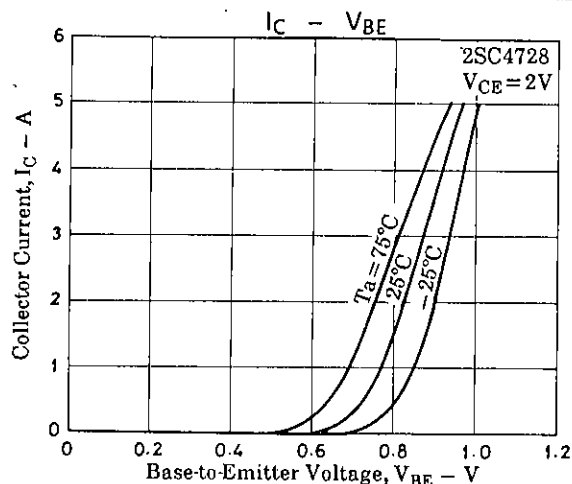
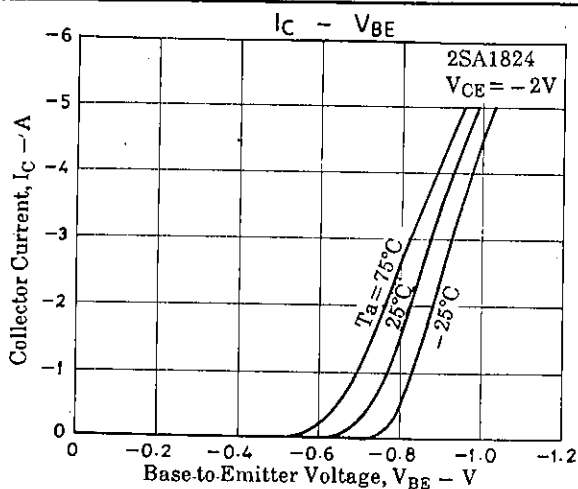
Switching Time Test Circuit



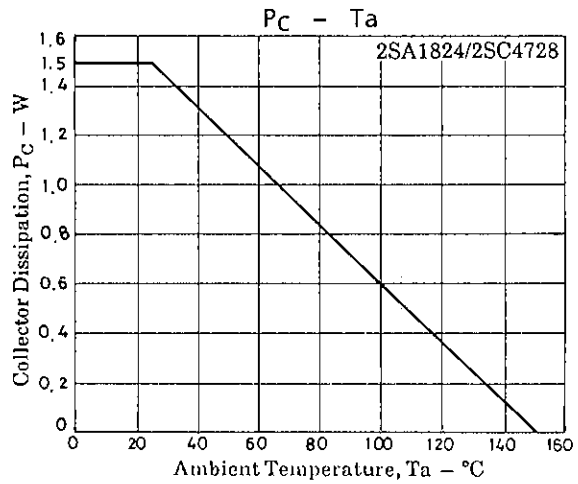
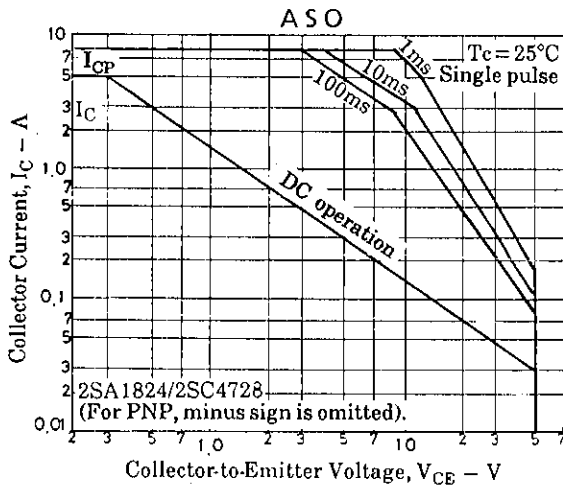
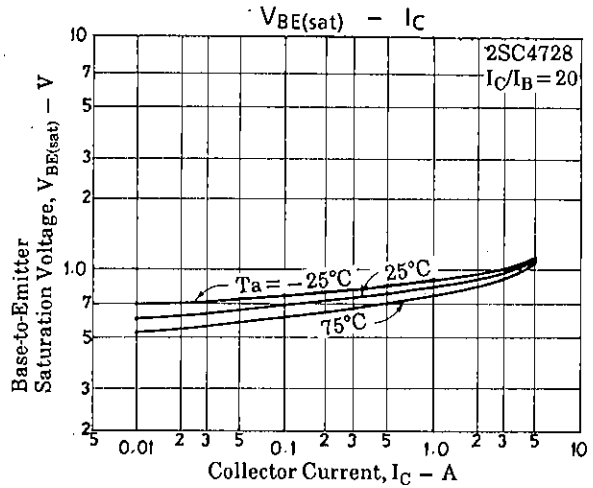
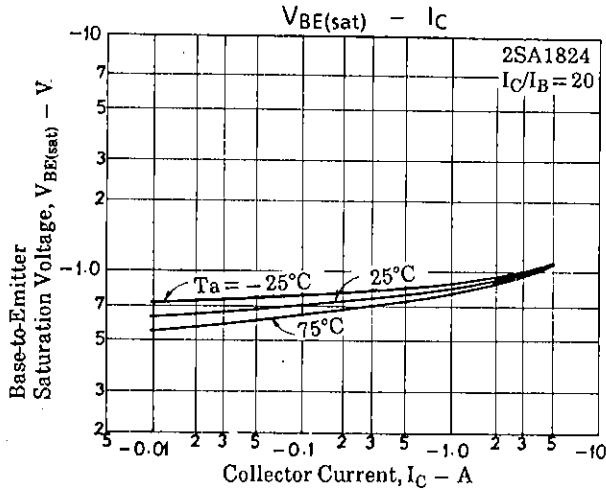
Unit (resistance: Ω , capacitance: F)



2SA1824/2SC4728



2SA1824/2SC4728



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