

SANYO	No.3578	2SA1770/2SC4614
		PNP/NPN Epitaxial Planar Silicon Transistors

High-Voltage Switching Applications

Features

- Adoption of MBIT process
- High breakdown voltage and large current capacity

(): 2SA1770

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CBO}	(-)180	V
Collector to Emitter Voltage	V_{CEO}	(-)160	V
Emitter to Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)1.5	A
Collector Current(Pulse)	I_{CP}	(-)2.5	A
Collector Dissipation	P_C	1	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}	$V_{CB} = (-)120V, I_E = 0$			(-)1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = (-)5V, I_C = (-)100mA$	100 *		400 *	
	$h_{FE(2)}$	$V_{CE} = (-)5V, I_C = (-)10mA$	80			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10V, I_C = (-)50mA$		120		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)10V, f = 1MHz$		(22)		pF
				14		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)500mA, I_B = (-)50mA$	(-)200		(-)500	mV
				130	450	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)500mA, I_B = (-)50mA$	(-)0.85		(-)1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-)180			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{FE} = \infty$	(-)160			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu A, I_C = 0$	(-)6			V

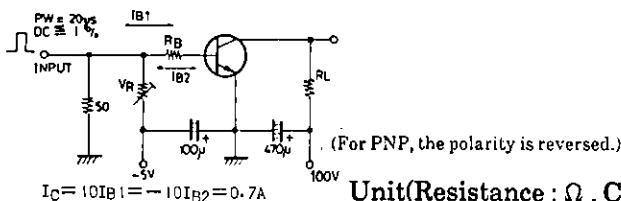
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* : The 2SA1770/2SC4614 are classified by 100mA h_{FE} as follows :

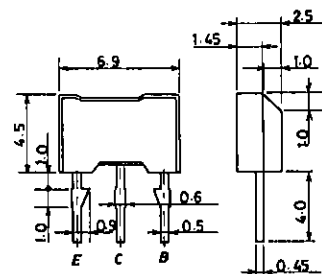
100 R	200	140 S	280	200 T	400
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h_{FE} rank : R, S, T

Switching Time Test Circuit



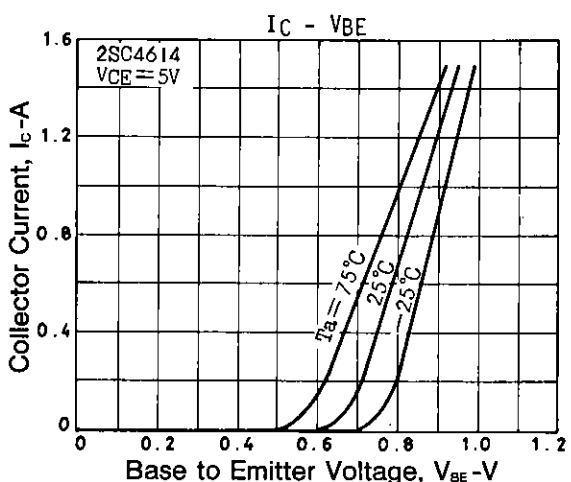
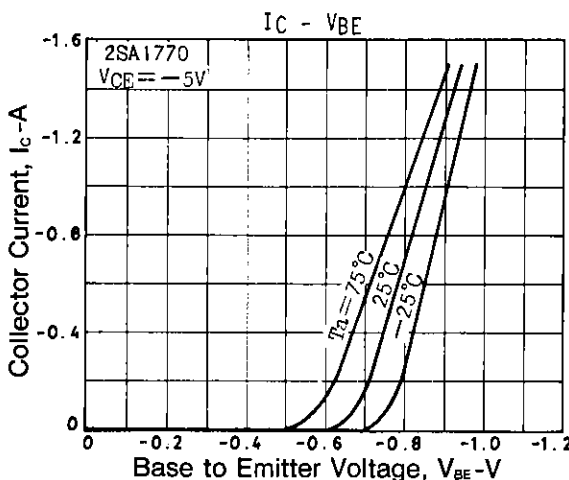
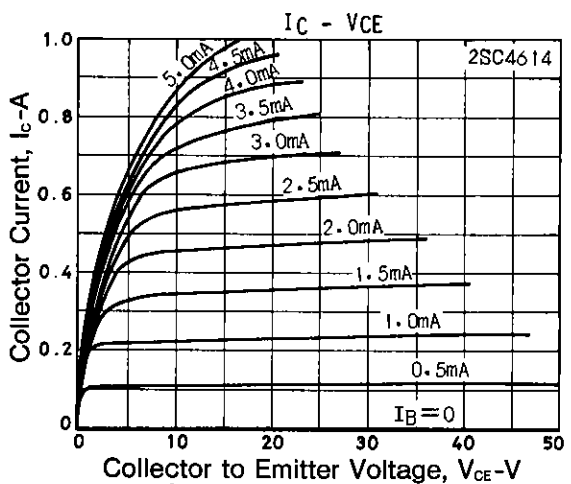
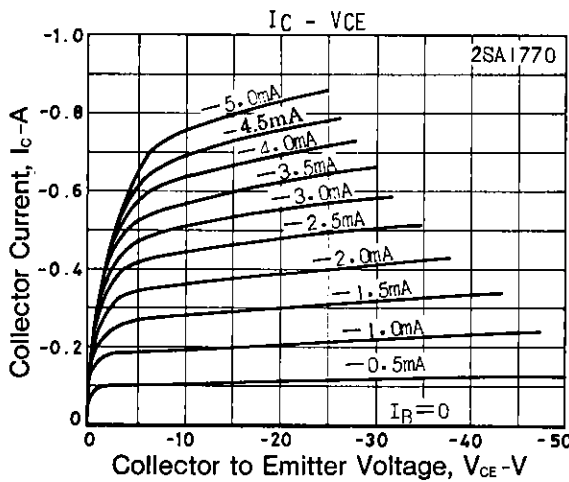
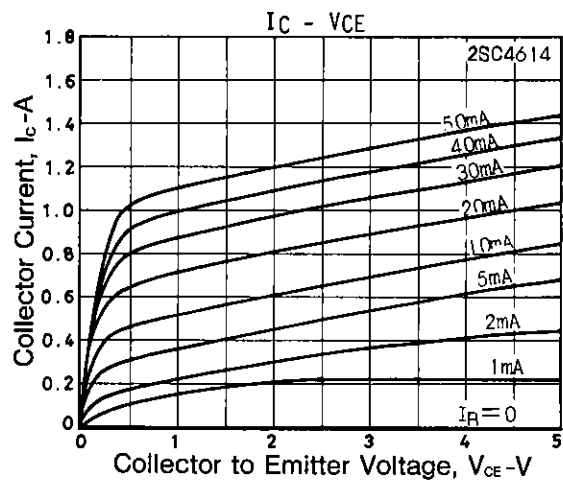
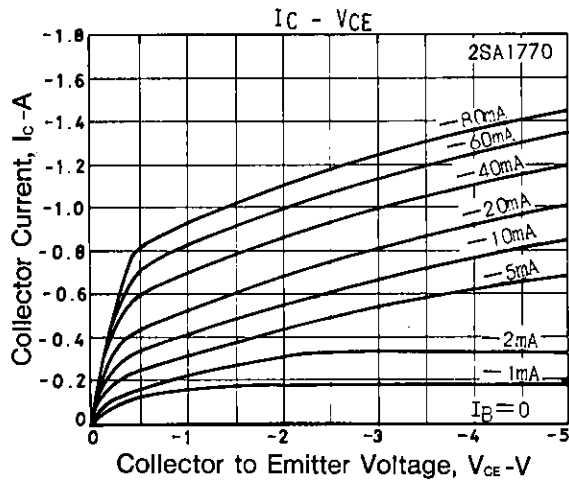
Package Dimensions 2064
(unit: mm)



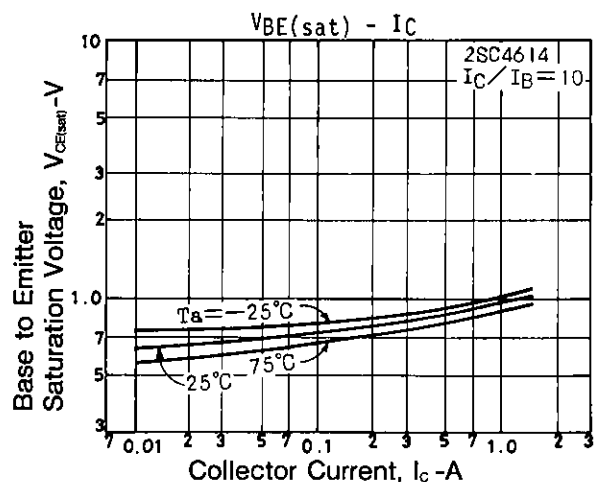
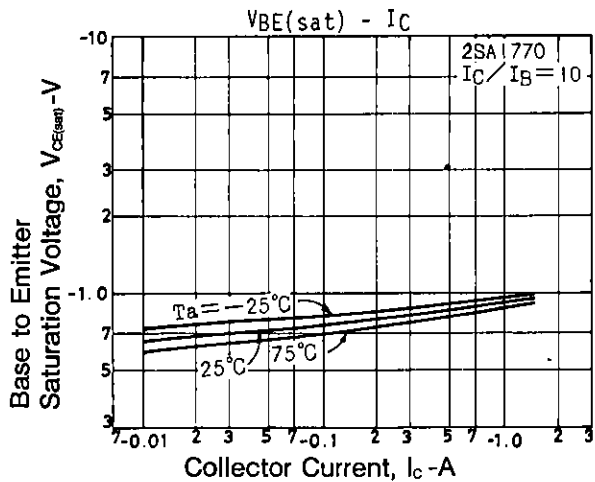
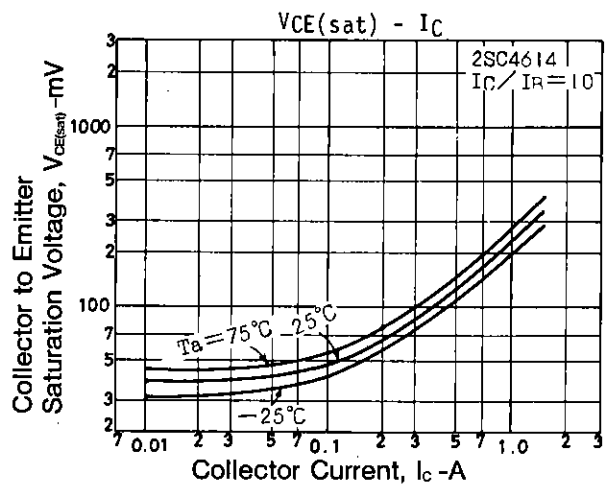
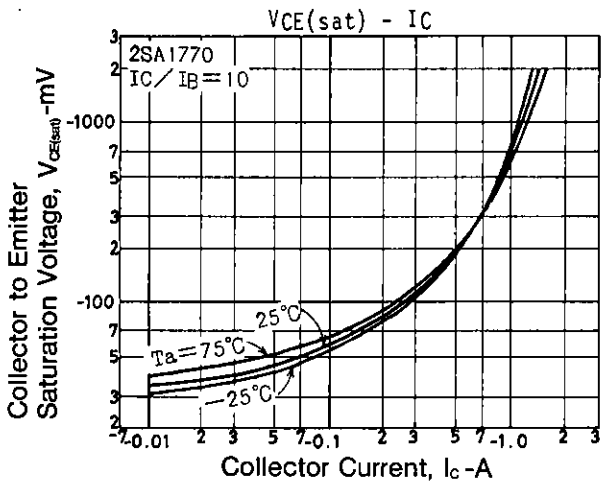
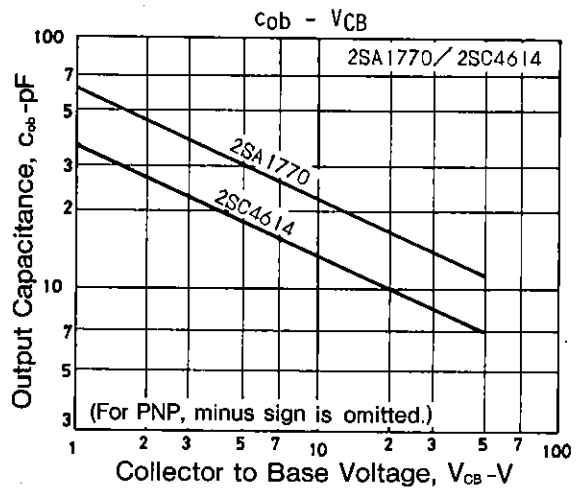
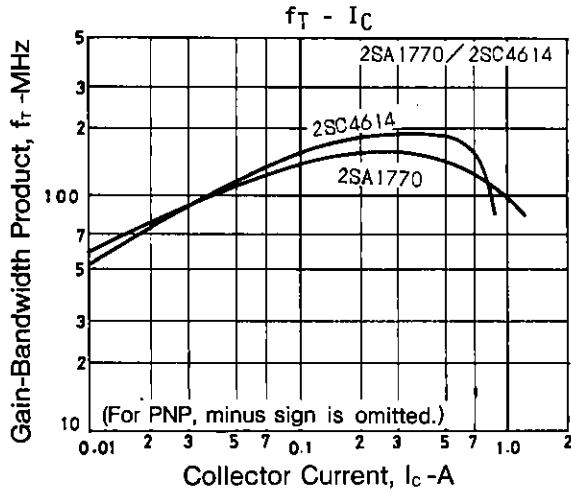
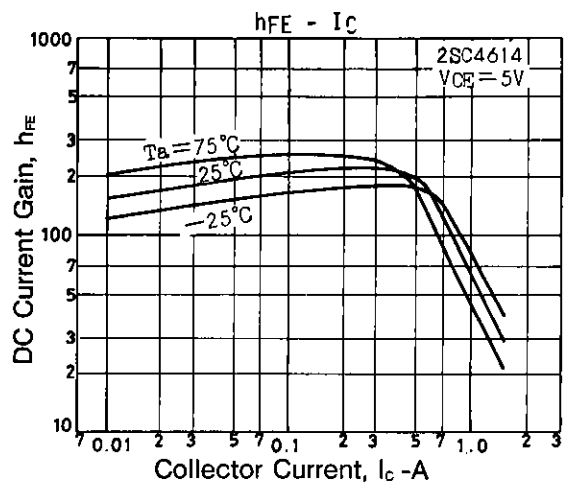
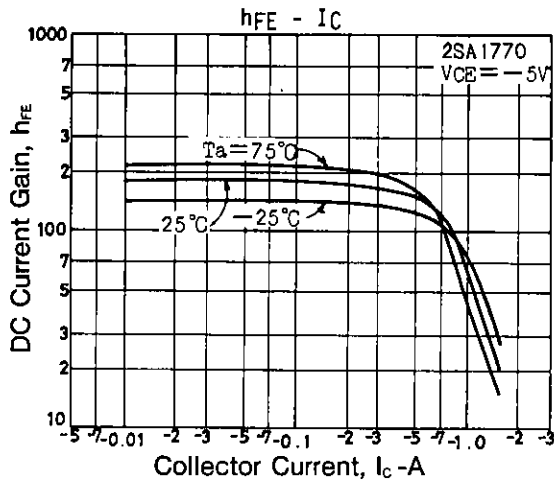
E: Emitter
C: Collector
B: Base
SANYO: NMP

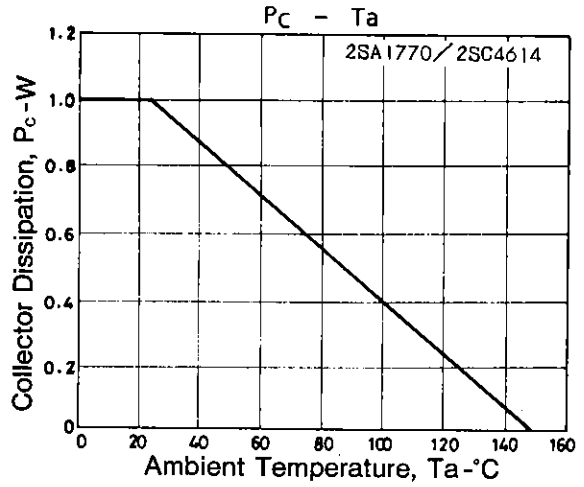
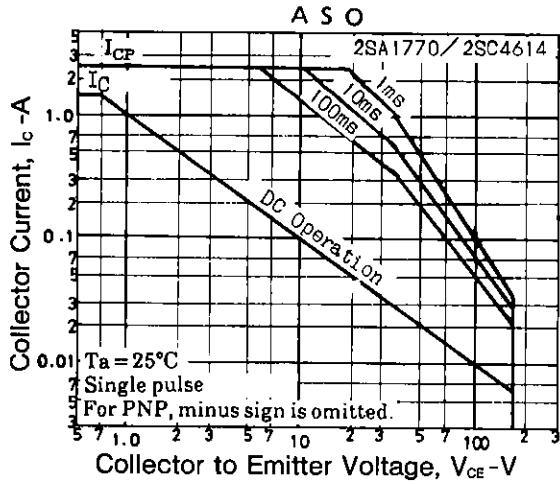
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			min	typ	max	unit
Turn-on Time	t_{on}	See specified Test Circuit.		(40)		ns
		"		40		ns
Storage Time	t_{sta}	"		(0.7)		μs
		"		1.2		μs
Fall time	t_f	"		(40)		ns
		"		80		ns



2SA1770/2SC4614





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