

2SA1770/2SC4614

High-Voltage Switching Applications

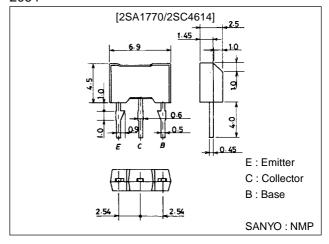
Features

- · Adoption of MBIT process.
- \cdot High breakdown voltage and large current capacity.

Package Dimensions

unit:mm

2064



(): 2SA1770

Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	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	IC		(-)1.5	Α
Colletor Current (Pulse)	I _{CP}		(-)2.5	Α
Collector Dissipation	PC		1	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Cumbal	Conditions		Unit		
Farameter	Symbol	Symbol Conditions		typ	max	Offic
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	fT	V _{CE} =(-)10V, I _C =(-)50mA		120		MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(22)14		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)500mA, I _B =(-)50mA		(-200)	(-500)	mV
				130	450	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)500mA, I _B =(-)50mA		(-)0.85	(-)1.2	V

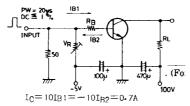
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Parameter	Symbol	Conditions		Unit		
Falanielei	Symbol	Conditions	min	typ	max	Onit
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =(-)10μA, I _E =0	(–)180			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =(-)1mA, R _{BE} =∞	(–)160			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	$I_{E}=(-)10\mu A, I_{C}=0$	(–)6			V
Furn-ON Time ton		See specified Test Circuit		(40)40		ns
Storage Time	t _{stg}	See specified Test Circuit		(0.7)		μs
				1.2		μs
Fall Time	t _f	See specified Test Circuit		(40)80		ns

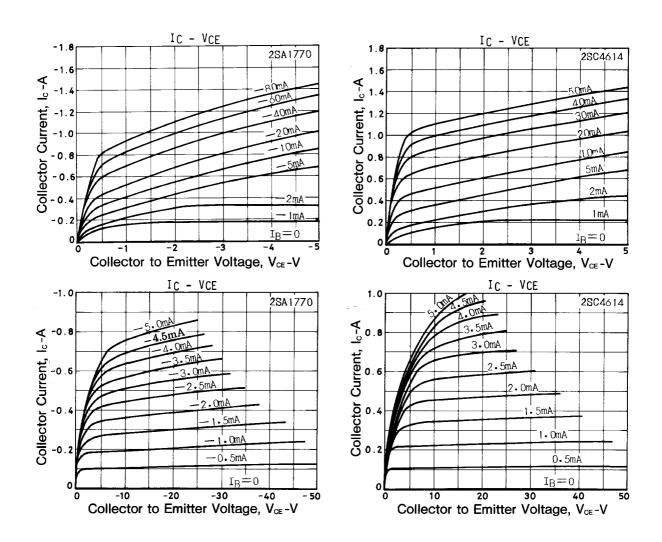
^{* ;} The 2SA1770/2SC4614 are classified by 100mA $h_{\mbox{\scriptsize FE}}$ as follows :

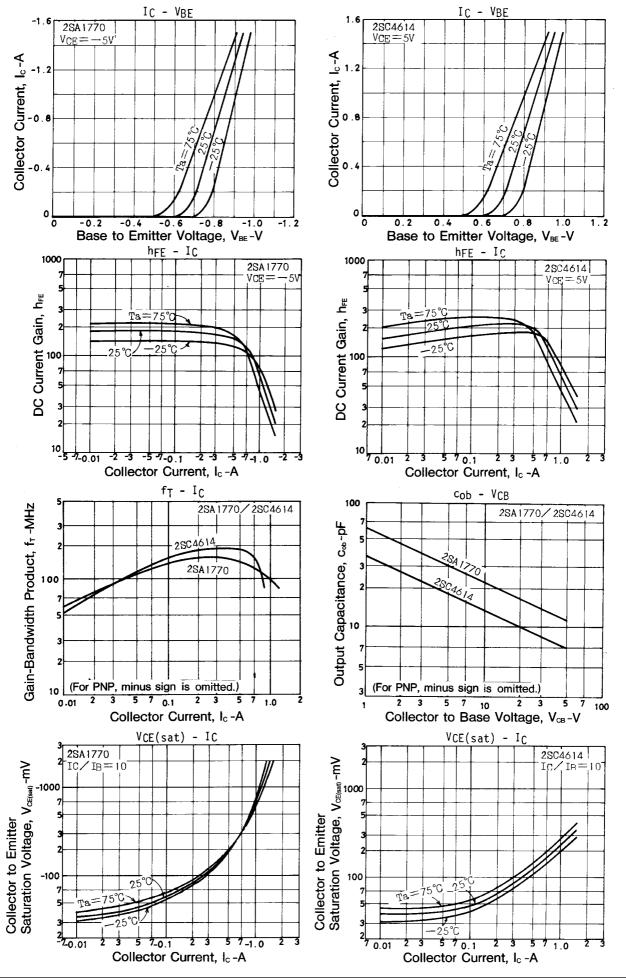
	100	R	200	140	S	280	200	Т	400
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Switching Time Test Circuit

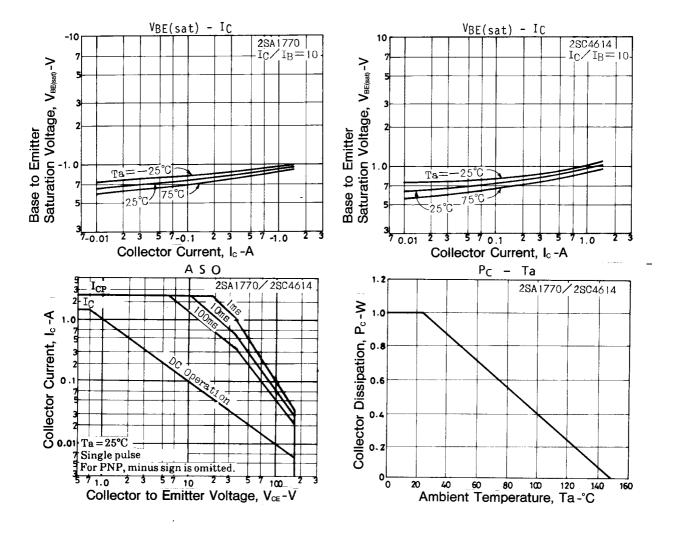


Unit (resistance : Ω , capacitance : F)





2SA1770/2SC4614



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