



2SA1773/2SC4616

High-Voltage Driver Applications

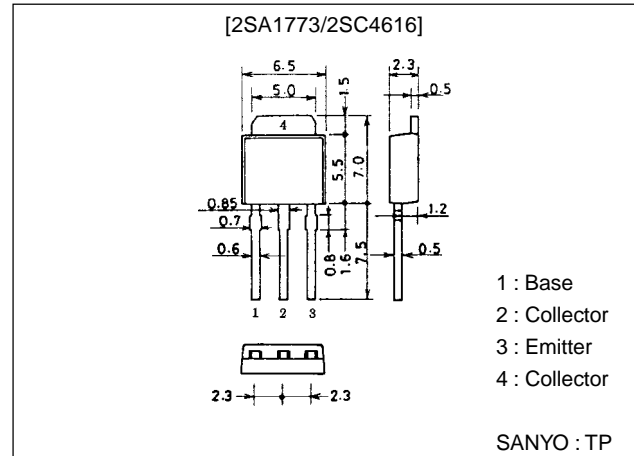
Features

- Large current capacity ($I_C=2A$).
- High breakdown voltage ($V_{CEO} \geq 400V$).

Package Dimensions

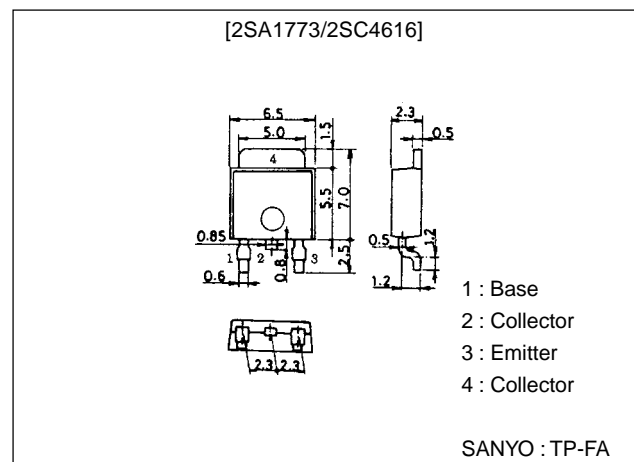
unit:mm

2045A



unit:mm

2044A



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2SA1773/2SC4616

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Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-)400	V
Collector-to-Emitter Voltage	V_{CEO}		(-)400	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)2	A
Collector Current (Pulse)	I_{CP}		(-)4	A
Collector Dissipation	P_C		1	W
		$T_c=25^\circ\text{C}$	15	W
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

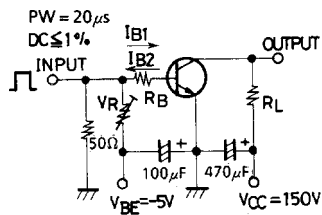
Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)300\text{V}, I_E = 0$			(-)1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)1.0	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)10\text{V}, I_C = (-)100\text{mA}$	40*		200*	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10\text{V}, I_C = (-)100\text{mA}$		(40)60		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)30\text{V}, f = 1\text{MHz}$		(25)15		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)500\text{mA}, I_B = (-)50\text{mA}$			(-)1.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)500\text{mA}, I_B = (-)50\text{mA}$			(-)1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-)400			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-)400			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu\text{A}, I_C = 0$	(-)5			V
Turn-ON Time	t_{on}	See specified Test Circuit		(0.12)		μs
				0.085		μs
Storage Time	t_{stg}	See specified Test Circuit		(3.0)		μs
				4.0		μs
Fall Time	t_f	See specified Test Circuit		(0.3)		ns
				0.6		μs

* : The 2SA1773/2SC4616 are classified by 100mA h_{FE} as follows :

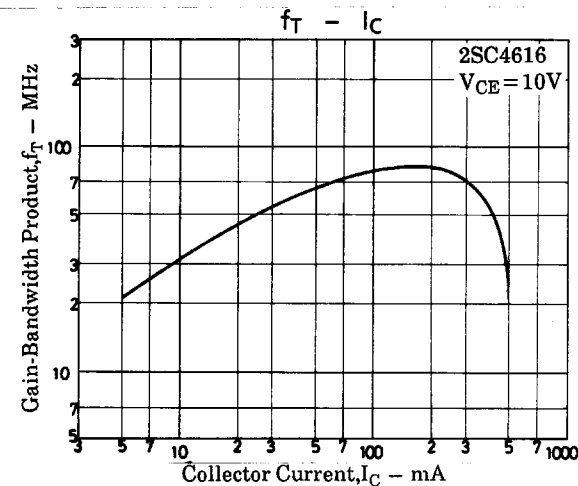
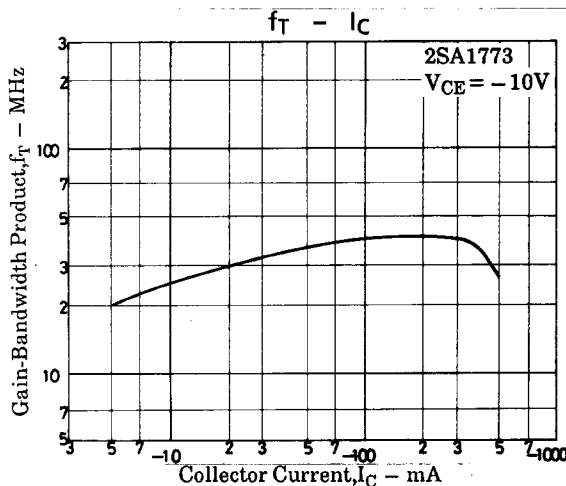
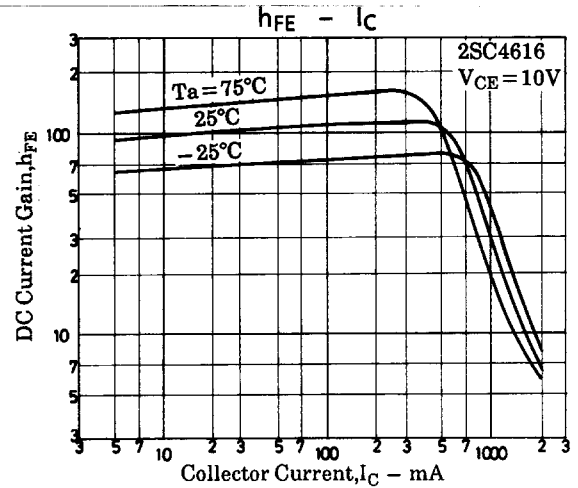
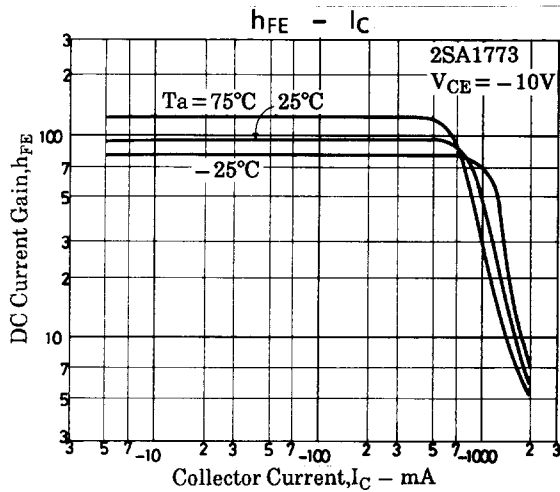
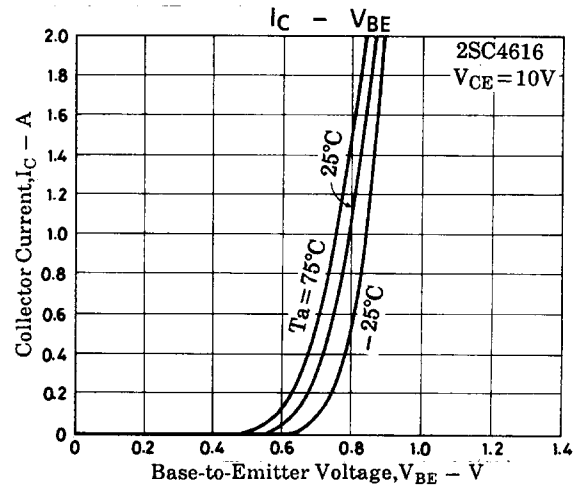
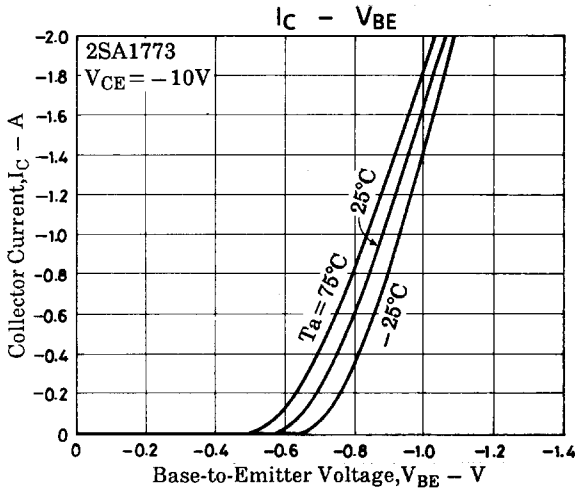
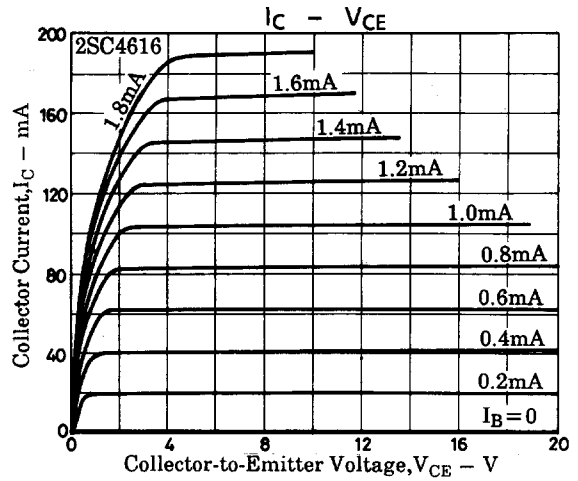
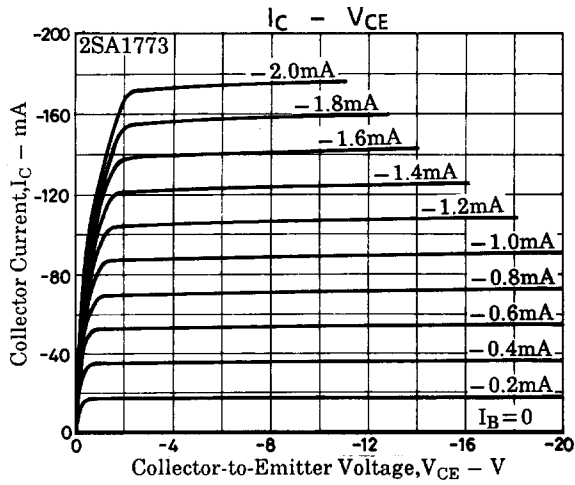
40	C	80	60	D	120	100	E	200
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Switching Time Test Circuit

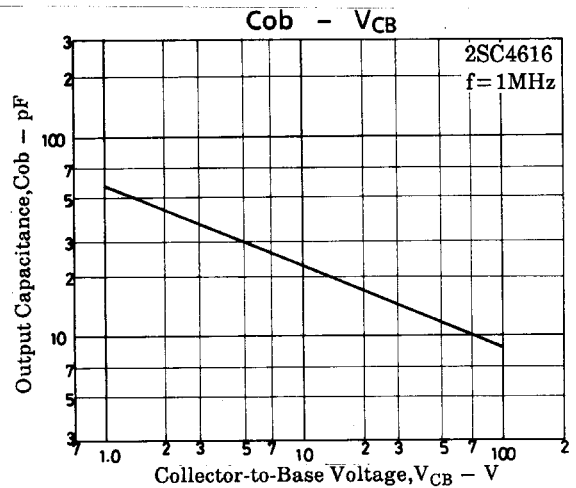
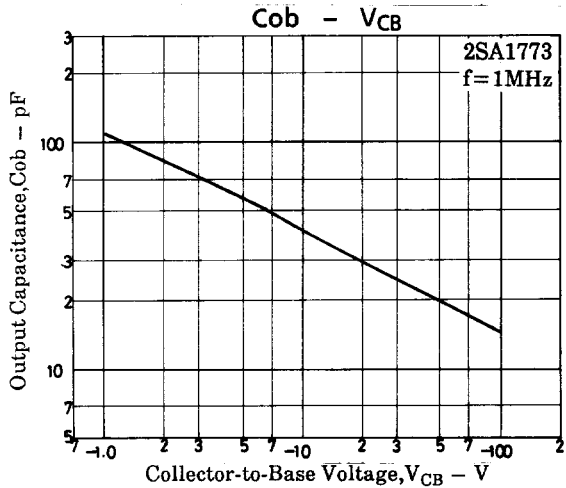
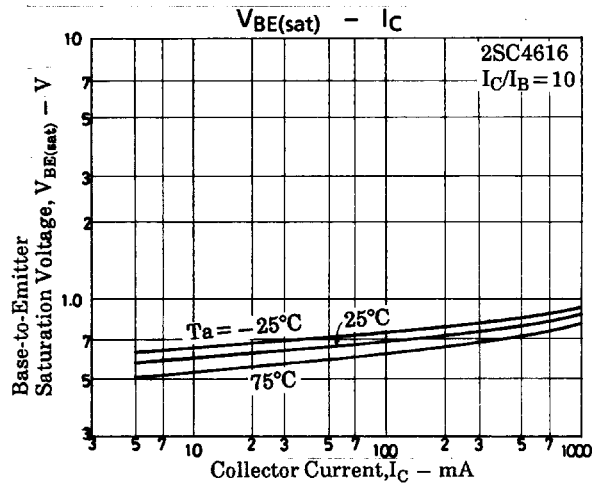
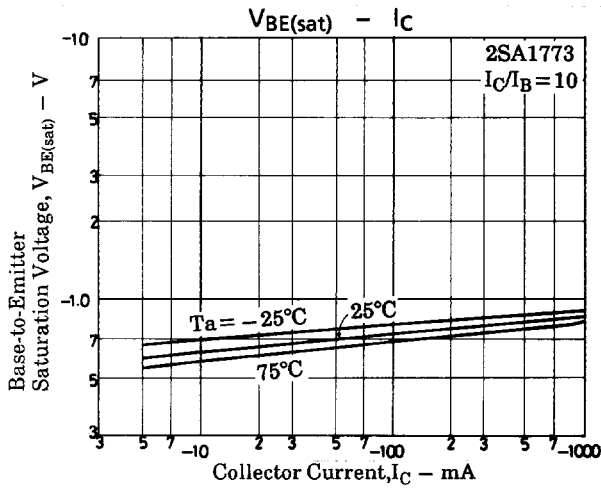
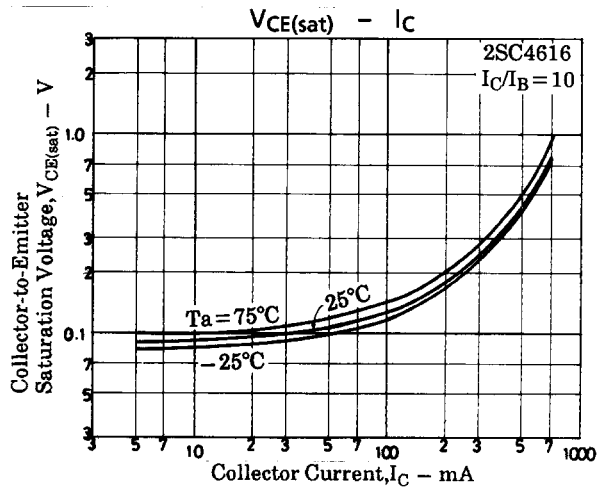
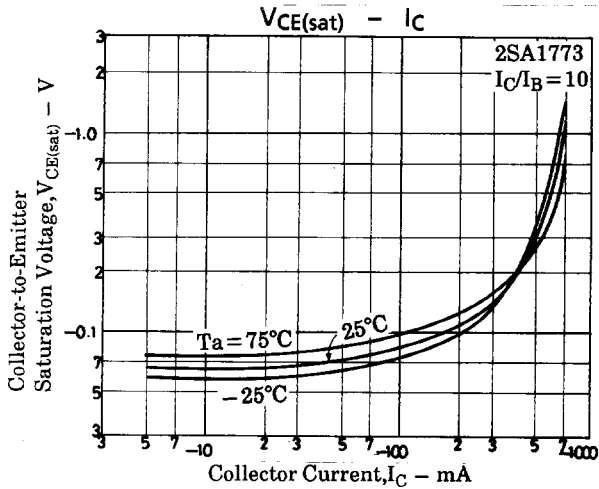
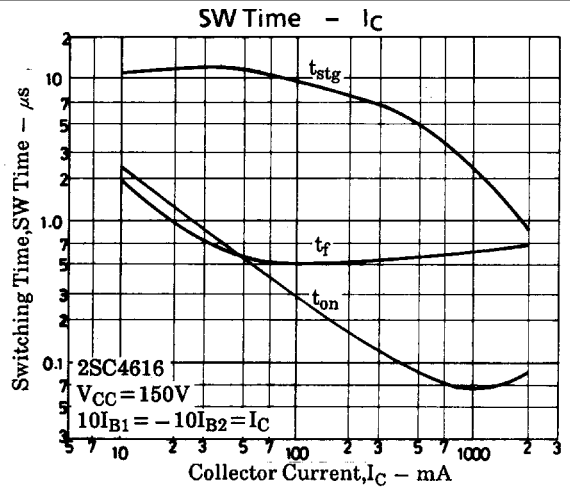
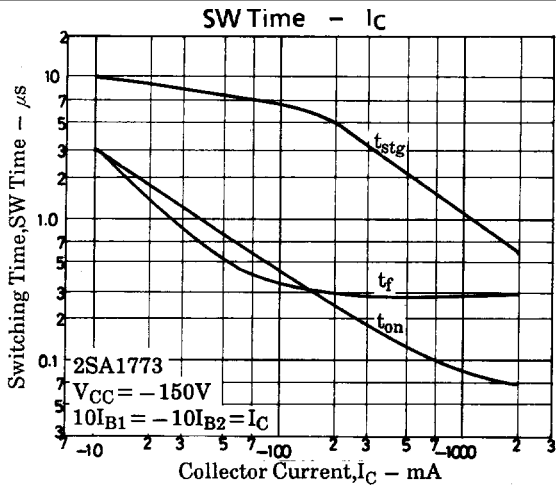


$10I_{B1} = -10I_{B2} = I_C = 500\text{mA}$
 $R_L = 300\Omega, R_B = 20\Omega, \text{ at } I_C = 500\text{mA}$
 Unit (resistance : Ω , capacitance : F)

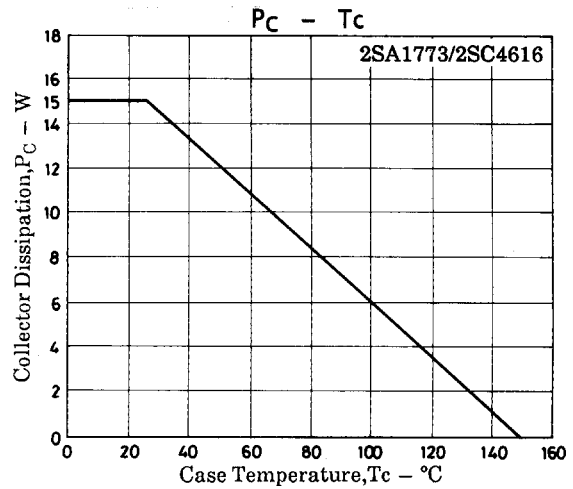
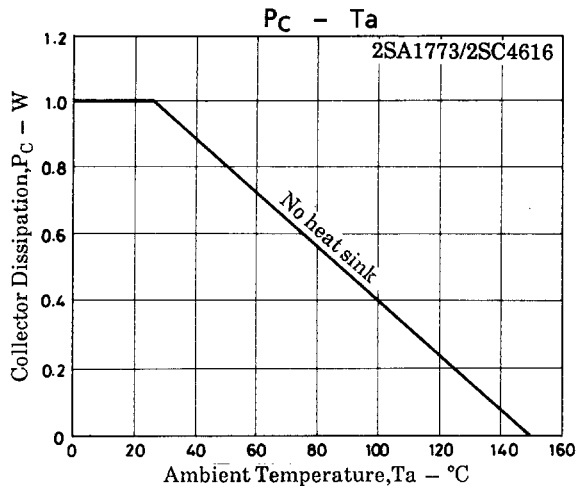
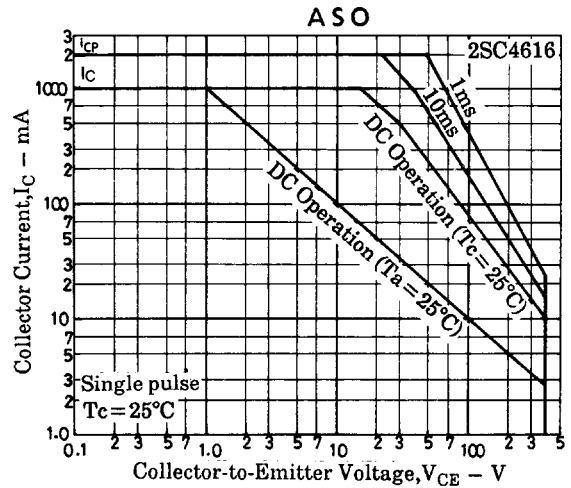
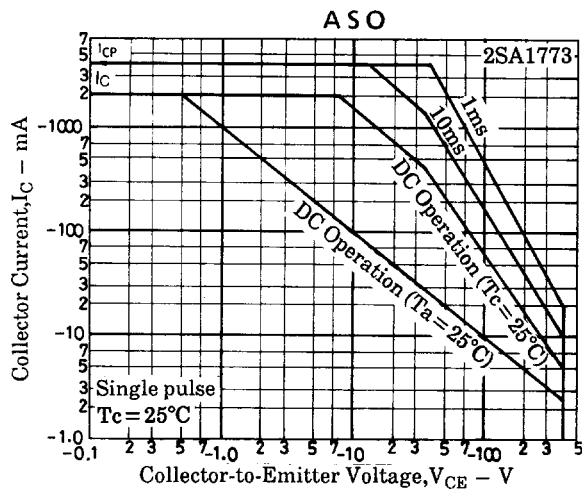
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