Ordering number: EN 3399C

SANYO

No.3399C

2SA1773/2SC4616

2SA1773:PNP Epitaxial Planar Silicon Transistor
2SC4616:NPN Triple Diffused Planar Silicon Transistor

High Voltage Driver Applications

Features

- Large current capacity (I_C=2A)
- High blocking voltage (V_{CEO}≧400V)

( ) : 2SA1773

Absolute Maximum Ratings at Ta=25°C

				unit
Collector-to-Base Voltage	V_{CBO}		(−)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
		Tc=25°C	15	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

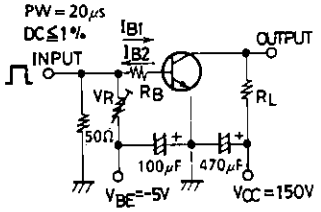
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=(−)300V,I_E=0			(−)1.0	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(−)4V,I_C=0			(−)1.0	μA
DC Current Gain	h_{FE}	V_{CE}=(−)10V,I_C=(−)100mA	40*		200*	
Gain-Bandwidth Product	f_T	V_{CE}=(−)10V,I_C=(−)100mA		(40)60		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=(−)500mA,I_B=(−)50mA			(−)1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=(−)500mA,I_B=(−)50mA			(−)1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=(−)10μA,I_E=0	(−)400			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=(−)1mA,R_{BE}=∞	(−)400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=(−)10μA,I_C=0	(−)5			V
Output Capacitance	Cob	V_{CB}=(−)30V,f=1MHz		(25)15		pF
Turn-ON Time	t_{on}	See specified Test Circuit.		(0.12)0.085		μs
Storage Time	t_{stg}	〃		(3.0)4.0		μs
Fall Time	t_f	〃		(0.3)0.6		μs

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

40 C 80	60 D 120	100 E 200

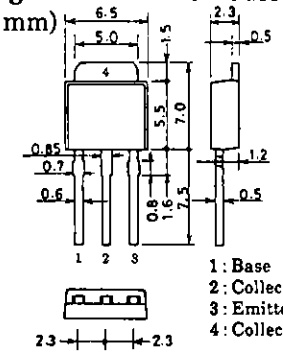
Switching Time Test Circuit



$10I_{B1}=-10I_{B2}=I_C$=500mA
R_L=300Ω, R_B=20Ω, at I_C=500mA
(For PNP, the polarity is reversed.)

Package Dimensions 2045A

(unit : mm)

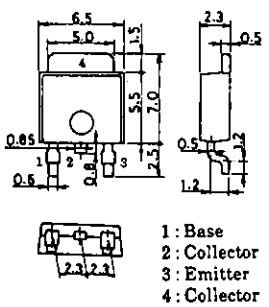


1 : Base
2 : Collector
3 : Emitter
4 : Collector

SANYO : TP

Package Dimensions 2044A

(unit : mm)



1 : Base
2 : Collector
3 : Emitter
4 : Collector

SANYO : TP-FA

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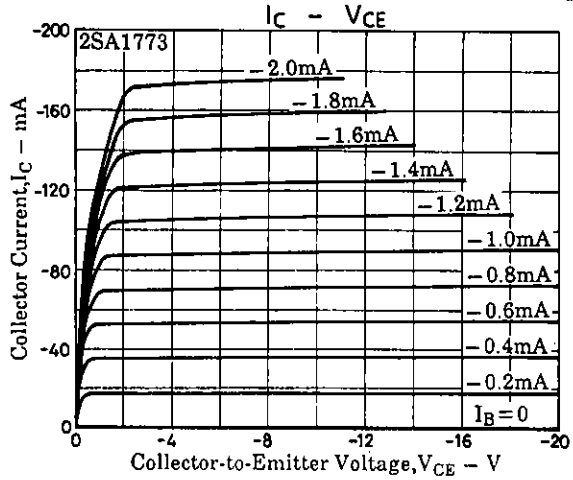
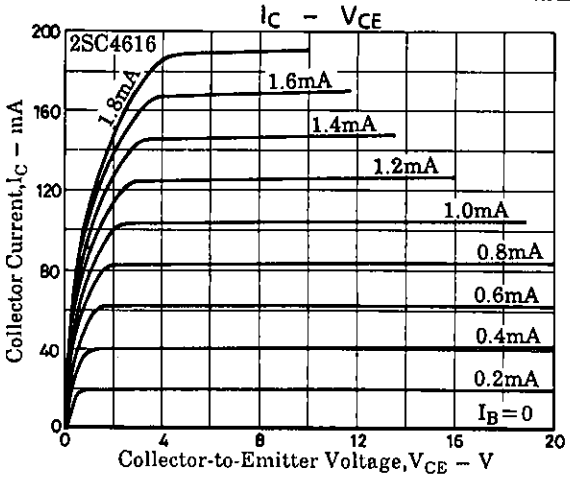
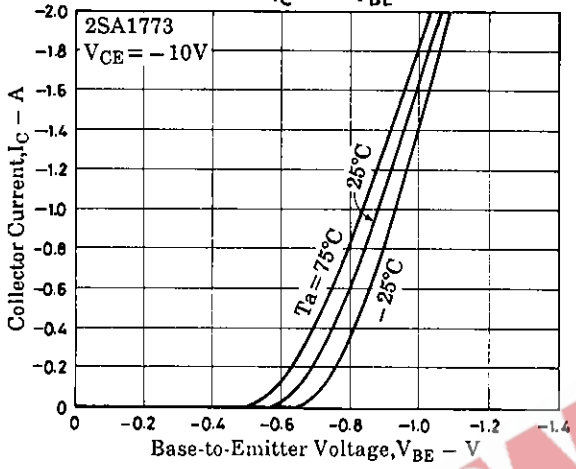
I_C – V_{CE}



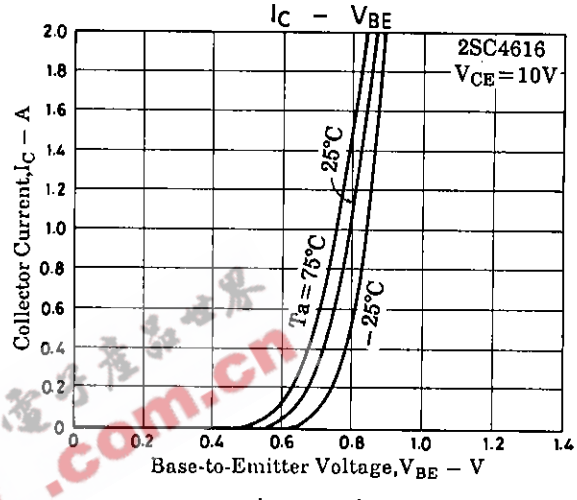
I_C – V_{CE}



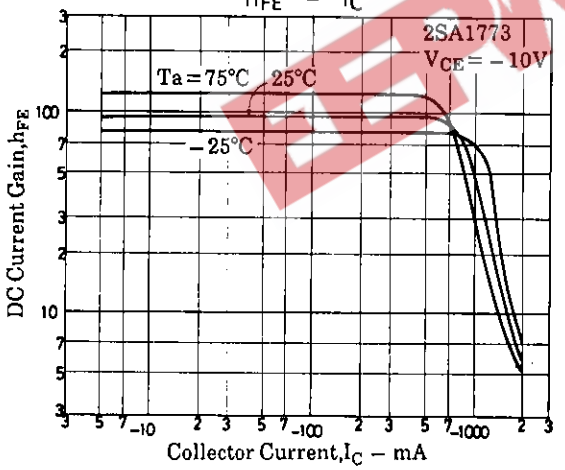
I_C – V_{BE}



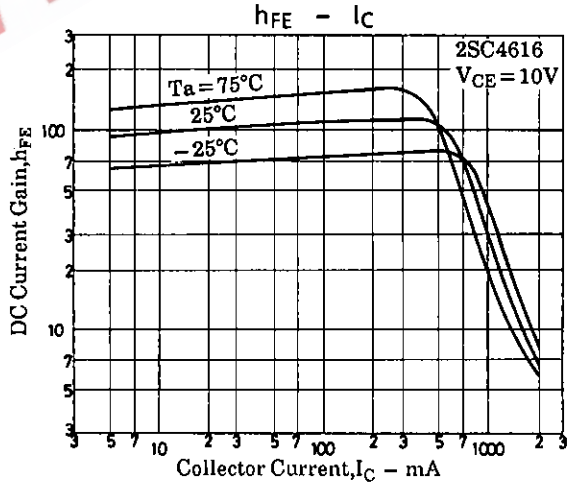
I_C – V_{BE}



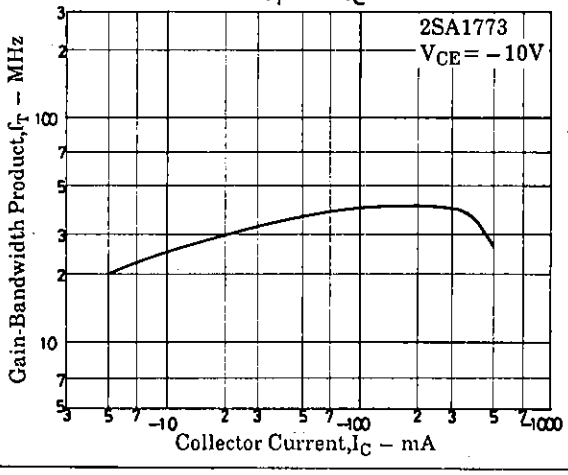
h_{FE} – I_C



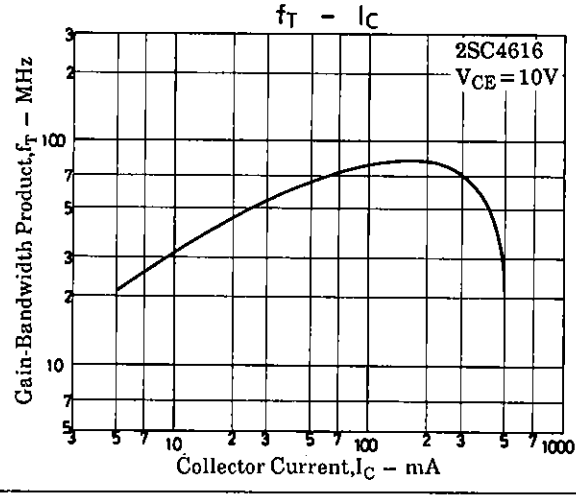
h_{FE} – I_C



f_T – I_C



f_T – I_C



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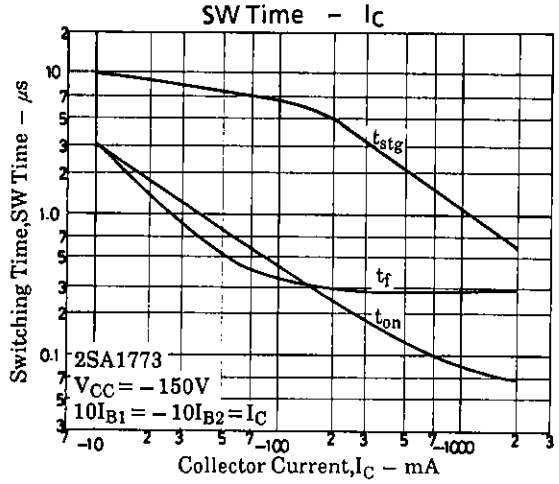
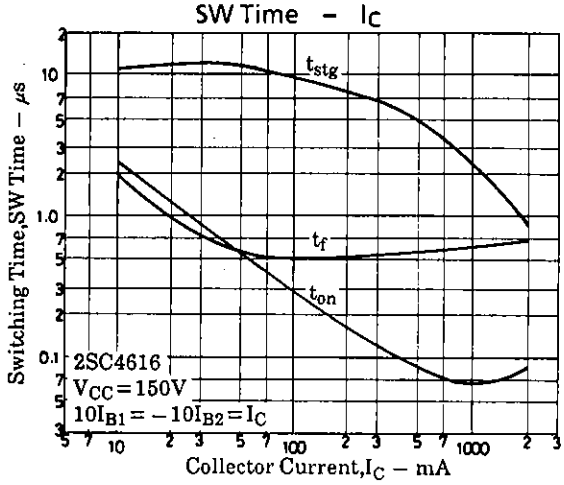
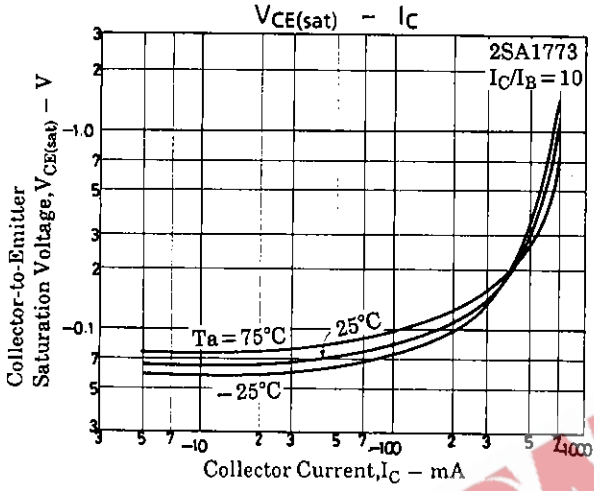
SW Time – I_C



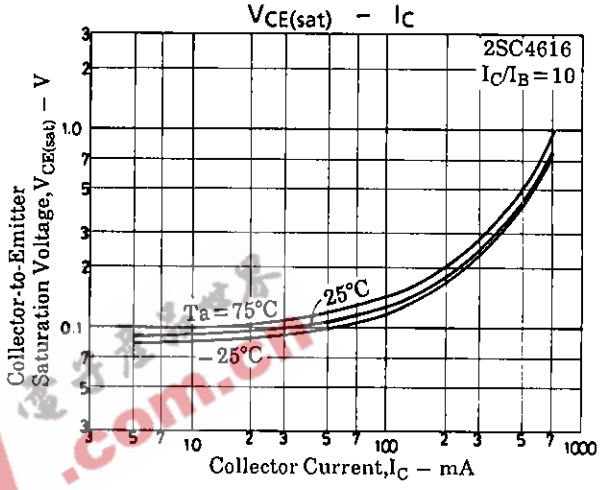
SW Time – I_C



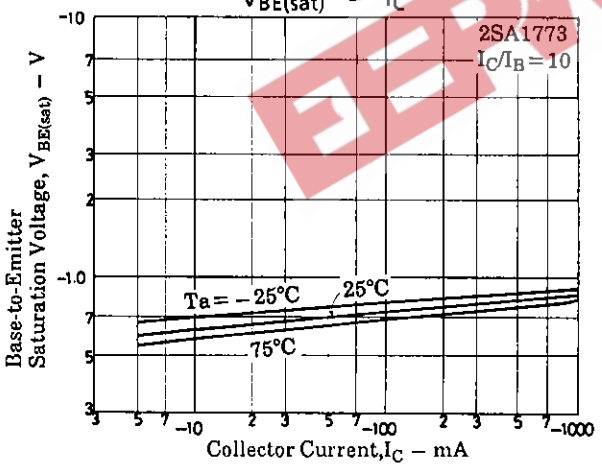
$V_{CE(sat)}$ – I_C



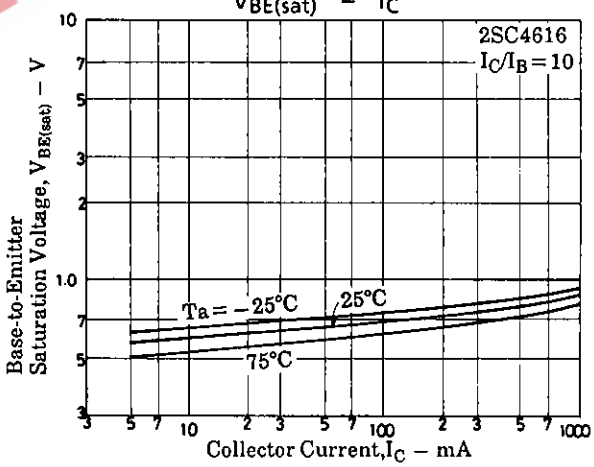
$V_{CE(sat)}$ – I_C



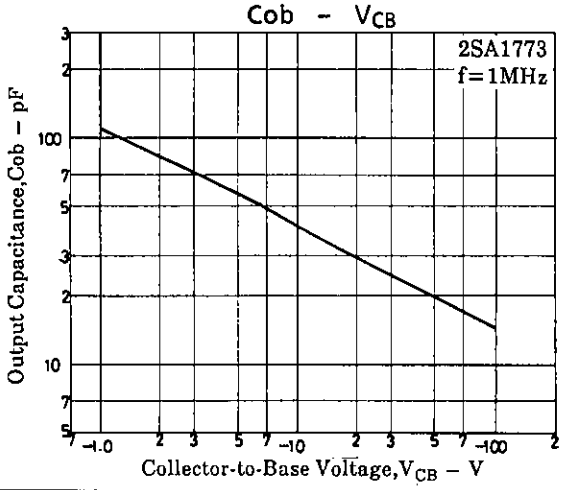
$V_{BE(sat)}$ – I_C



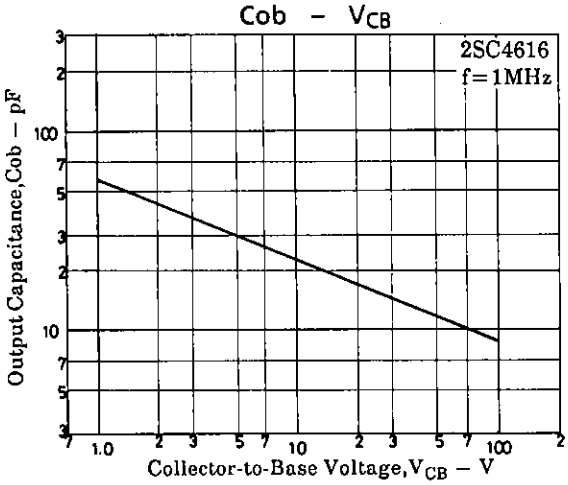
$V_{BE(sat)}$ – I_C



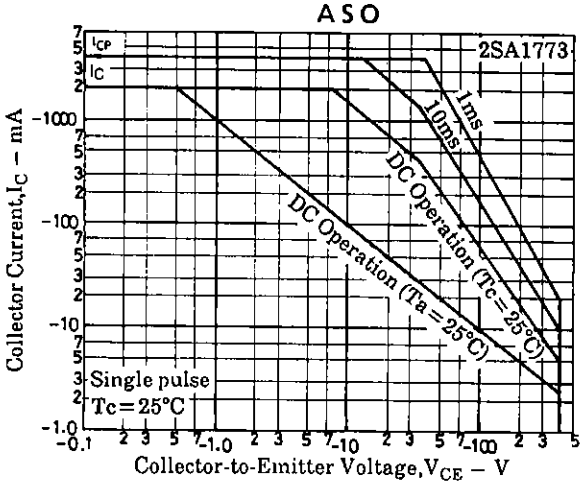
Cob – V_{CB}



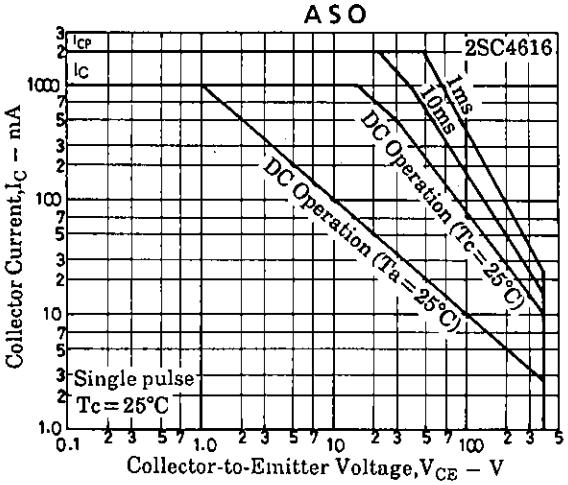
Cob – V_{CB}



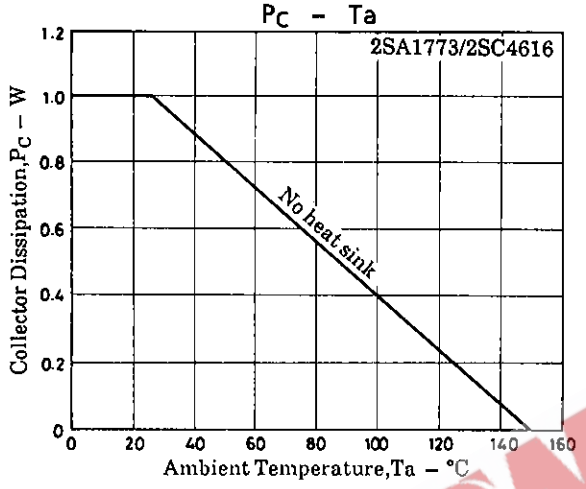
ASO



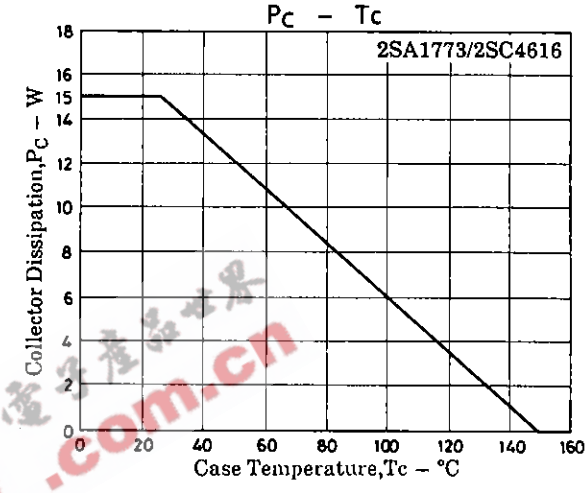
ASO



PC – Ta



PC – Tc



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