Ordering number: EN 2535

SANYO No.2535

2SA1606/2SC4159

PNP/NPN Epitaxial Planar Type Silicon Transistors
HIGH-VOLTAGE SWITCHING, AF 100W DRIVER APPLICATIONS

Applications

- High-voltage switching, AF power amp, 100W output predrivers

Features

- Micaless package facilitating mounting

( ): 2SA1606

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
Peak Collector Current	i_{cp}		(-)3	A
Collector Dissipation	P_C	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}=(-)120V, I_E=0			(-)10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)4V, I_C=0			(-)10	μA
DC Current Gain	h_{FE}	V_{CE}=(-)5V, I_C=(-)300mA	60*		200*	
Gain-Bandwidth Product	f_T	V_{CE}=(-)10V, I_C=(-)50mA		100		MHz
Output Capacitance	c_{ob}	V_{CB}=(-)10V, f=1MHz		(30)23		pF
Base to Emitter Voltage	V_{BE}	V_{CE}=(-)5V, I_C=(-)10mA			(-)1.5	V
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=(-)500mA, I_B=(-)50mA		(-0.5)		V
				0.3		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=(-)1mA, I_E=0	(-)180			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=(-)1mA, R_{BE}=∞	(-)160			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=(-)1mA, I_C=0	(-)6			V

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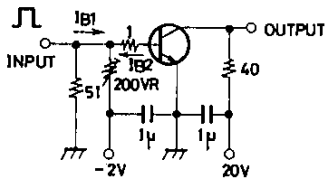
*: The 2SA1606/2SC4159 are classified by 300mA h_{FE} as follows:

60	D	120	100	E	200

Switching Test Circuit



$10I_{B1} = -10I_{B2} = I_C = 0.5A$

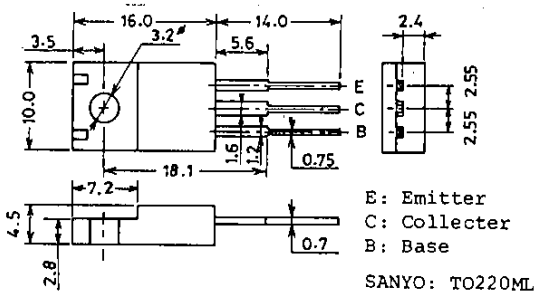
PW = 20μs

For PNP, the polarity is reversed.

Unit (resistance: Ω, capacitance: F)

Package Dimensions 2041

(unit: mm)



E: Emitter
C: Collecter
B: Base

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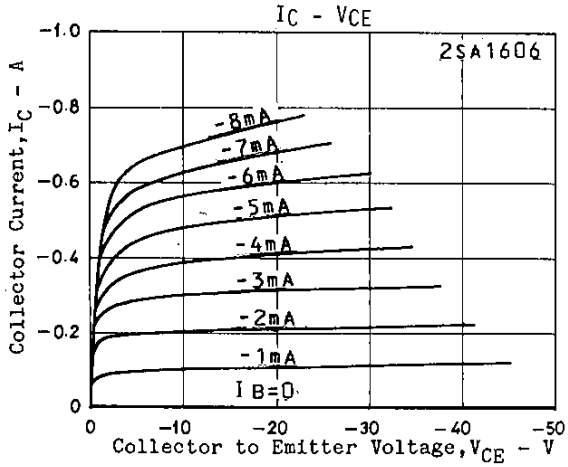
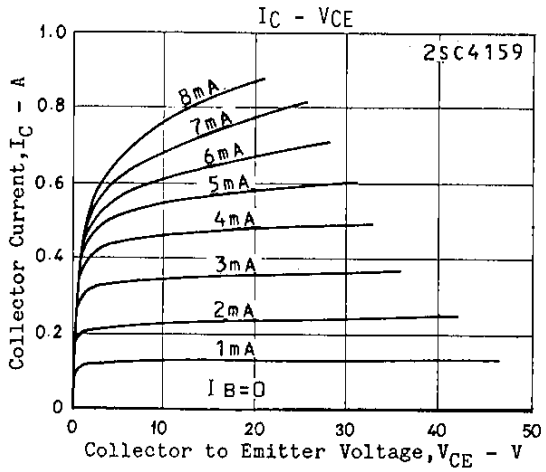
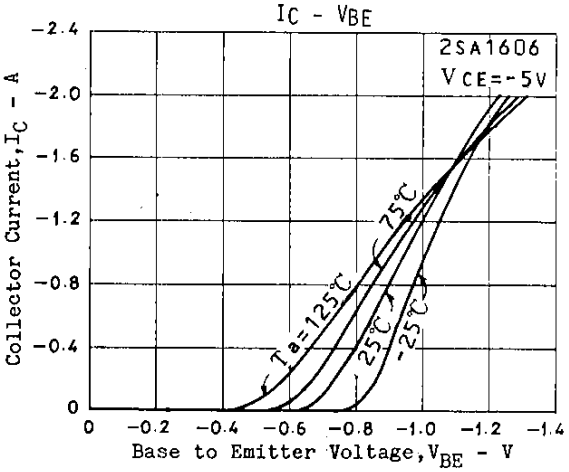
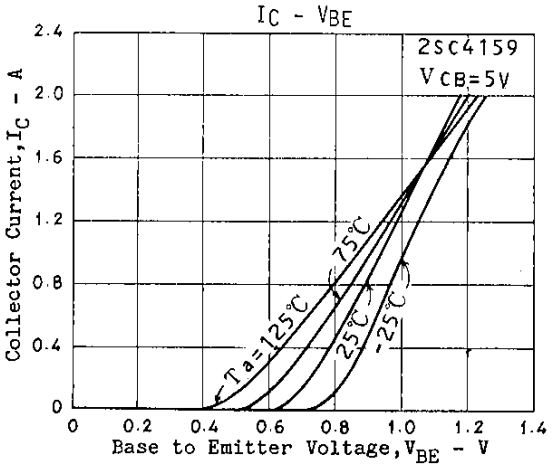
Continued from preceding page.

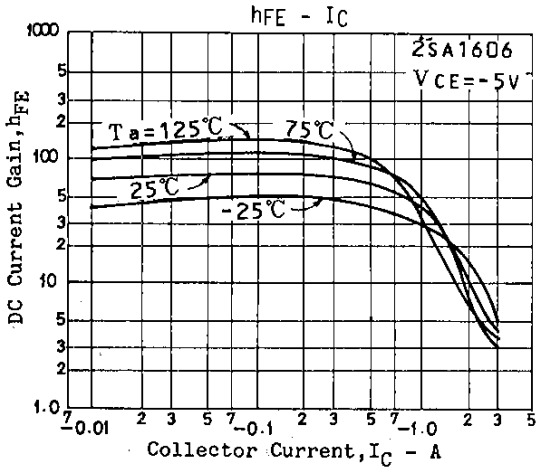
			min	typ	max	unit
Turn-on Time	t_{on}	See specified Test Circuit.		(0.29)		μs
				0.15		μs
Fall Time	t_f	"		(0.19)		μs
				0.48		μs
Storage Time	t_{stg}	"		(0.48)		μs
				0.81		μs

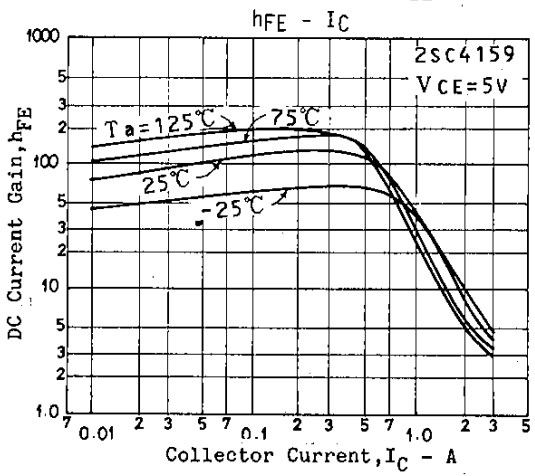


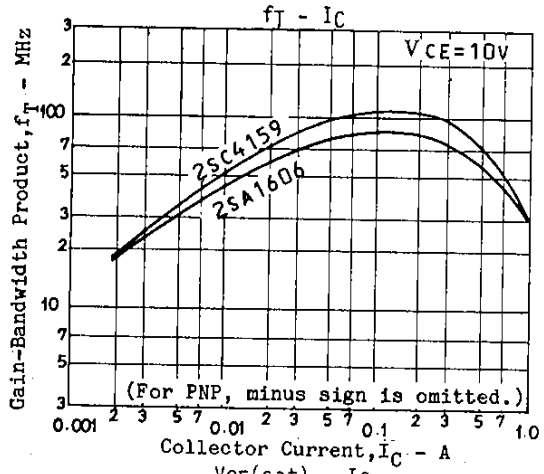


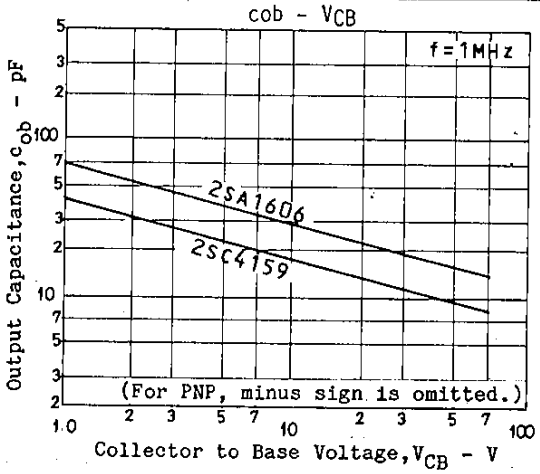


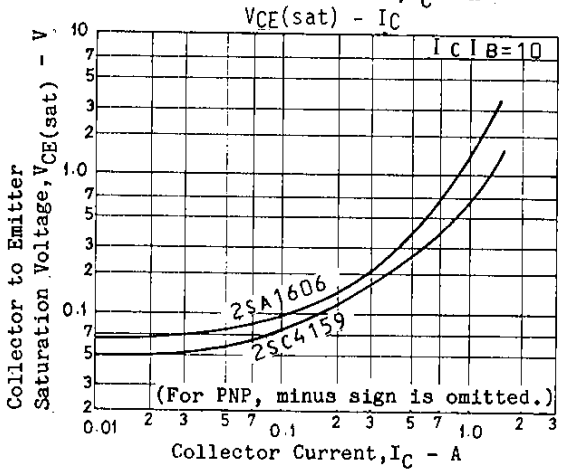


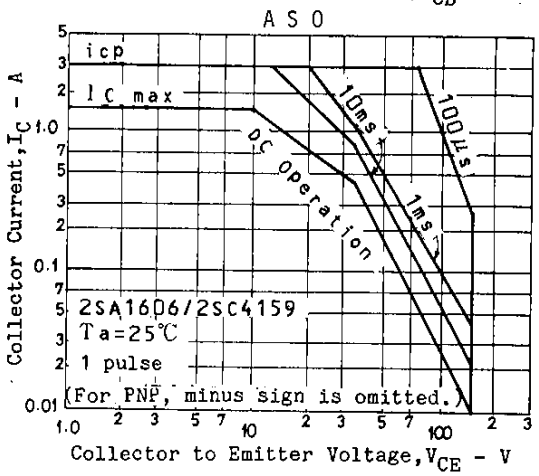


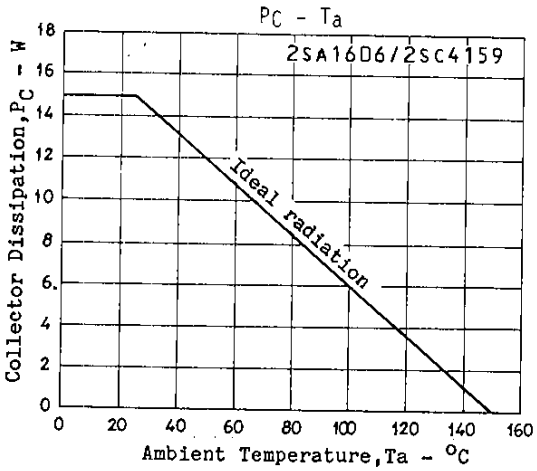












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