

<b>SANYO</b>	No.2535	2SA1606/2SC4159
		PNP/NPN Epitaxial Planar Type Silicon Transistors <b>HIGH-VOLTAGE SWITCHING, AF 100W DRIVER APPLICATIONS</b>

**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 <sub>CB0</sub>	(-)180	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>	(-)160	V
Emitter-to-Base Voltage	V <sub>EBO</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)1.5	A
Peak Collector Current	i <sub>cp</sub>	(-)3	A
Collector Dissipation	P <sub>C</sub>	15	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

Tc=25°C

**Electrical Characteristics at Ta=25°C**

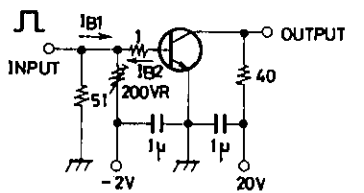
			min	typ	max	unit
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =(-)120V, I <sub>E</sub> =0			(-)10	µA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =(-)4V, I <sub>C</sub> =0			(-)10	µA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)300mA	60*		200*	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =(-)10V, I <sub>C</sub> =(-)50mA		100		MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> =(-)10V, f=1MHz		(30)23		pF
Base to Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)10mA			(-)1.5	V
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =(-)500mA, I <sub>B</sub> =(-)50mA		(-0.5)		V
				0.3		V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =(-)1mA, I <sub>E</sub> =0		(-)180		V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =(-)1mA, R <sub>BE</sub> =∞		(-)160		V
E-B Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =(-)1mA, I <sub>C</sub> =0		(-)6		V

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\*: The 2SA1606/2SC4159 are classified by 300mA h<sub>FE</sub> as follows:

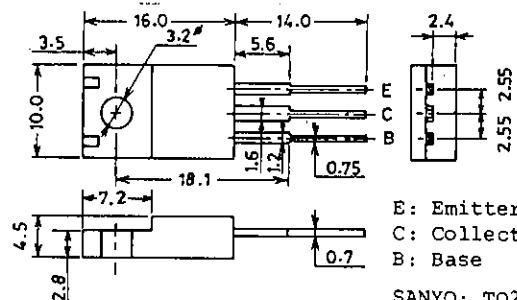
60	D	120	100	E	200
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**Switching Test Circuit**



10I<sub>B1</sub> = -10I<sub>B2</sub> = I<sub>C</sub> = 0.5A  
 PW = 20µs  
 For PNP, the polarity is reversed.  
 Unit (resistance: Ω, capacitance: F)

**Package Dimensions 2041 (unit:mm)**

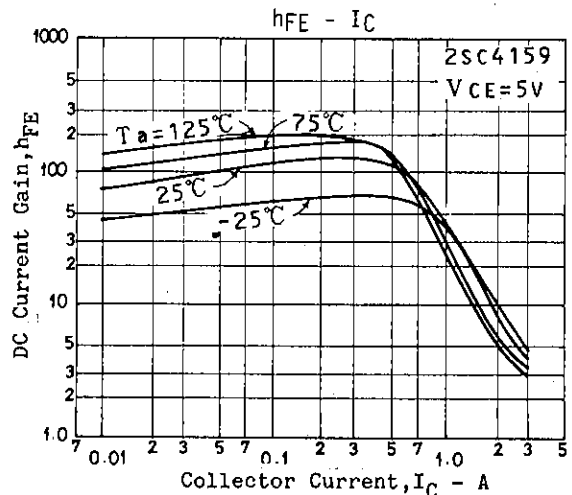
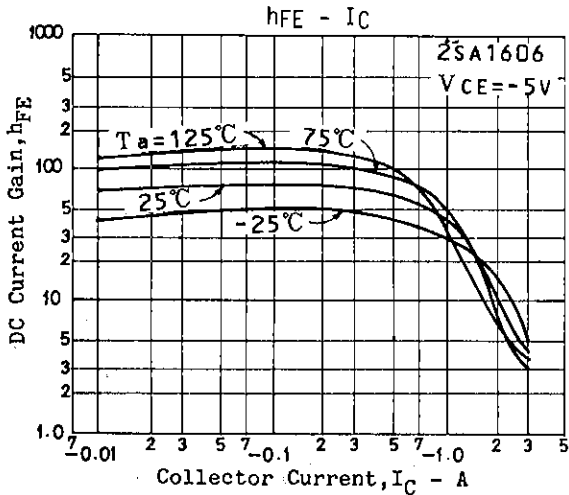
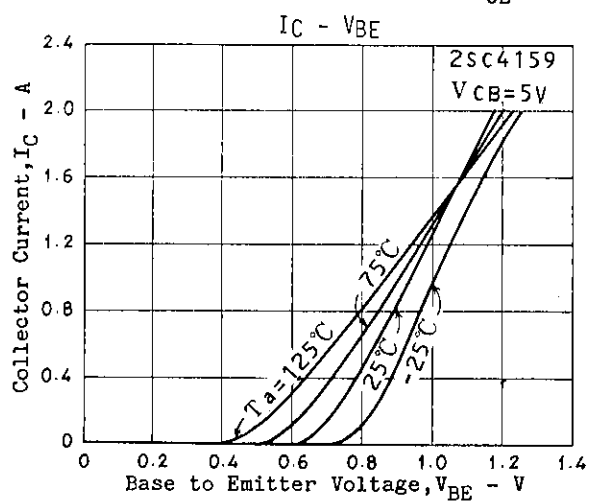
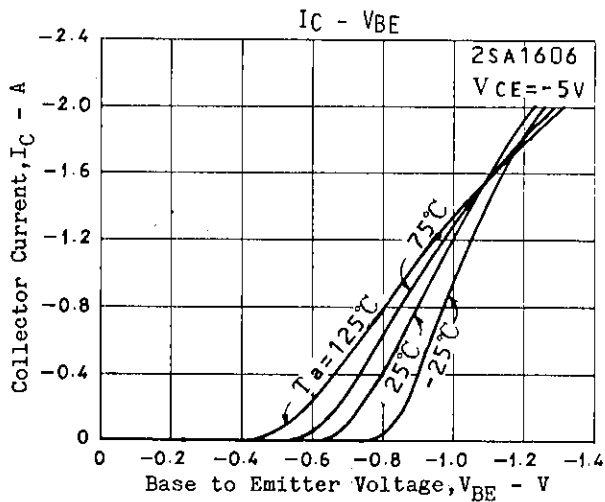
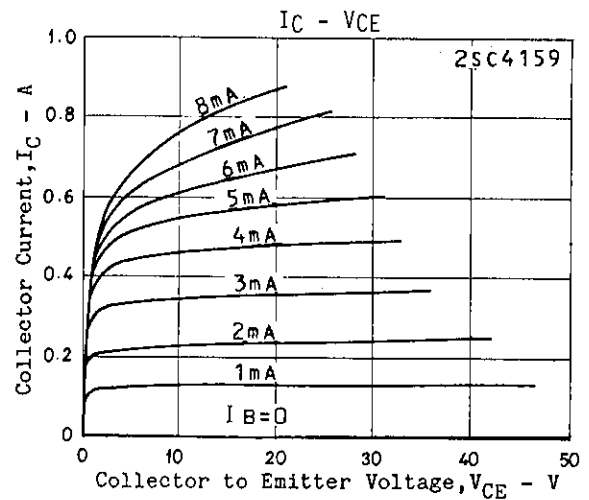
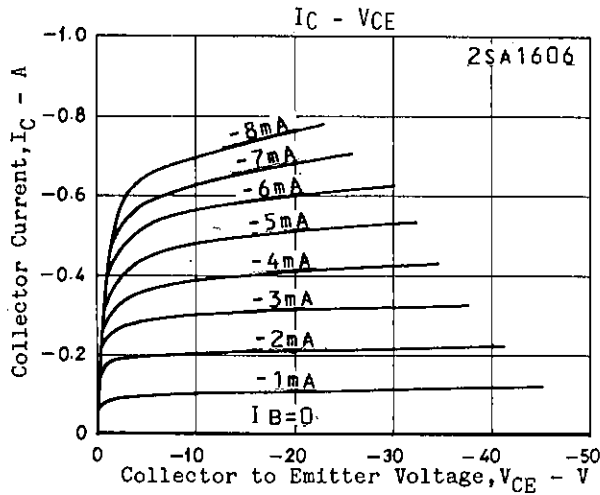


E: Emitter  
 C: Collector  
 B: Base

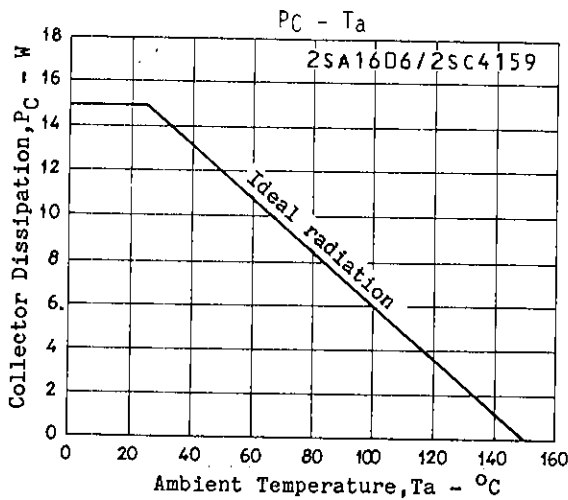
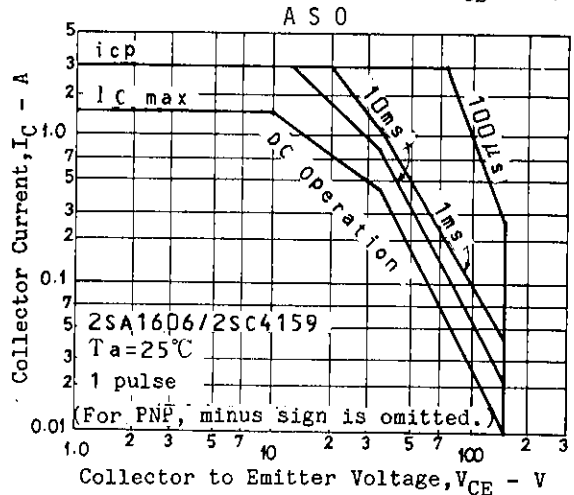
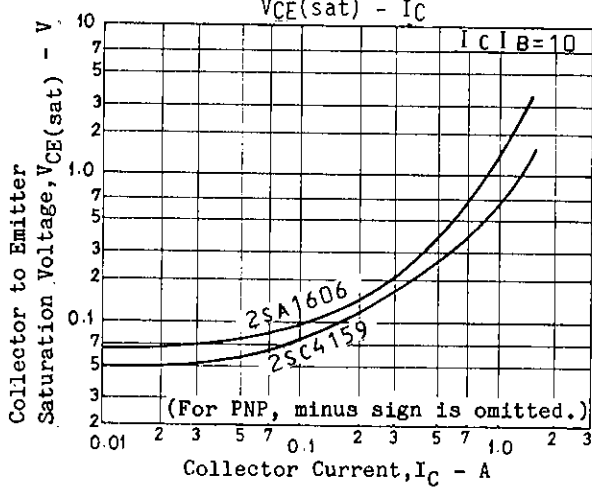
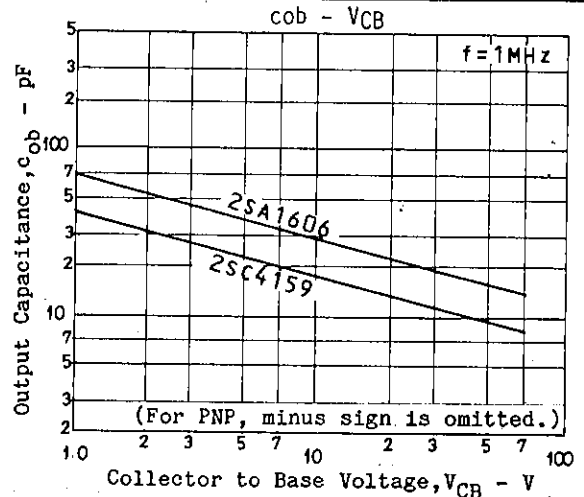
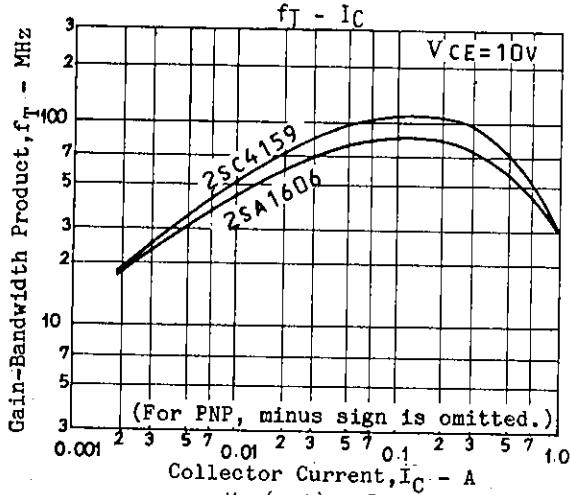
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			min	typ	max	unit
Turn-on Time	$t_{on}$	See specified Test Circuit.		(0.29)		$\mu s$
Fall Time	$t_f$	"		0.15		$\mu s$
Storage Time	$t_{stg}$	"		(0.19)		$\mu s$
				0.48		$\mu s$
				(0.48)		$\mu s$
				0.81		$\mu s$



2SA1606/2SC4159



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