

SANYO	No.2535	2SA1606/2SC4159
PNP/NPN Epitaxial Planar Silicon Transistors		
160V/1.5A, 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 _{CB0}	(-)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
Collector Current (Pulse)	I _{CP}	(-)3	A
Collector Dissipation	P _C	15	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Tc=25°C

Electrical Characteristics at Ta=25°C

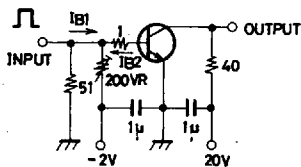
			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} =(-)120V, I _E =0			(-)10	µA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0			(-)10	µA
DC Current Gain	h _{FE}	V _{CE} =(-)5V, I _C =(-)300mA	60*		200*	
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)50mA		100		MHz
Output Capacitance	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
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Switching Test Circuit



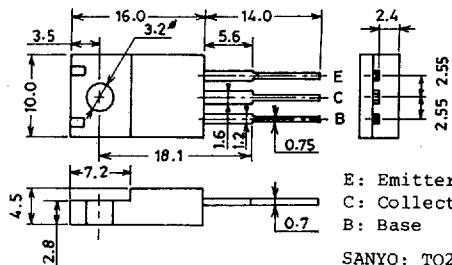
10I_{B1} = -10I_{B2} = I_C = 0.5A
PW = 20 µs

For PNP, the polarity is reversed.

Unit (Resistance : Ω, Capacitance : F)

Package Dimensions 2041

(unit:mm)



E: Emitter
C: Collector
B: Base

SANYO: TO220ML

Continued from preceding page.

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

