

SANYO	No.829H	2SA1481/2SC2960
		PNP/NPN Epitaxial Planar Silicon Transistors
High-Speed Switching Applications		

Features

- . Fast switching speed
- . High breakdown voltage

(): 2SA1481

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CB0}	(-)60	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)150	mA
Collector Current(Pulse)	I_{CP}	(-)400	mA
Collector Dissipation	P_C	250	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics at Ta=25°C

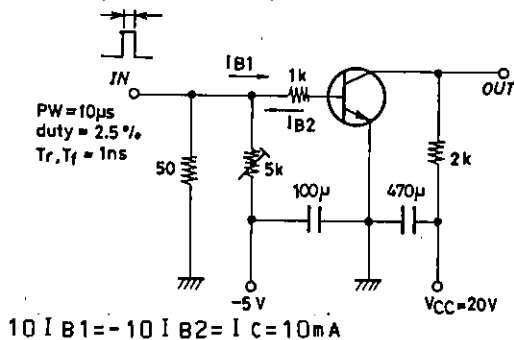
		min	typ	max	unit
Collector Cutoff Current	I_{CBO} $V_{CB}=(-)40V, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO} $V_{EB}=(-)4V, I_C=0$			(-)0.1	μA
DC Current Gain	h_{FE} $V_{CE}=(-)6V, I_C=(-)1mA$	100*		560*	
Gain-Bandwidth Product	f_T $V_{CE}=(-)6V, I_C=(-)1mA$		100		MHz
Output Capacitance	c_{ob} $V_{CB}=(-)6V, f=1MHz$		2.7(4.0)		pF
C-E Saturation Voltage	$V_{CE(sat)}$ $I_C=(-)10mA, I_B=(-)1mA$		(-)0.1	(-)0.4	V
B-E Saturation Voltage	$V_{BE(sat)}$ $I_C=(-)10mA, I_B=(-)1mA$		(-)0.75	(-)1.1	V
C-B Breakdown Voltage	$V_{(BR)CBO}$ $I_C=(-)10\mu A, I_E=0$	(-)60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$ $I_C=(-)1mA, R_{BE}=\infty$	(-)50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$ $I_E=(-)10\mu A, I_C=0$	(-)5			V
Delay Time	t_d See specified Test Circuit.		40	60	ns
Rise Time	t_r "		80(120)	130(230)	ns
Storage Time	t_{stg} "		230(190)	450(700)	ns
Fall Time	t_f "		160(240)	250(390)	ns

*: The 2SA1481/2SC2960 are classified by 1mA h_{FE} as follows:

100	E	200	160	F	320	280	G	560
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Switching Time Test Circuit

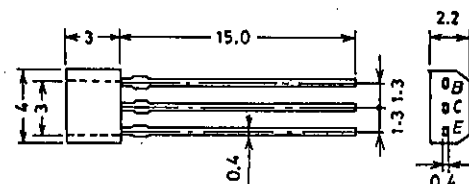
(For PNP, the polarity is reversed.)



Unit(Resistance : Ω , Capacitance : F)

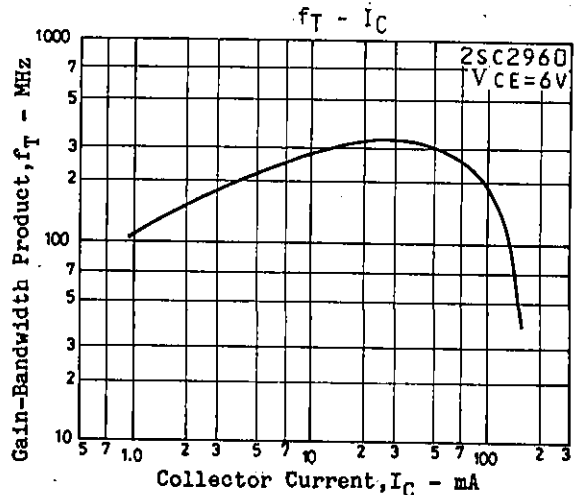
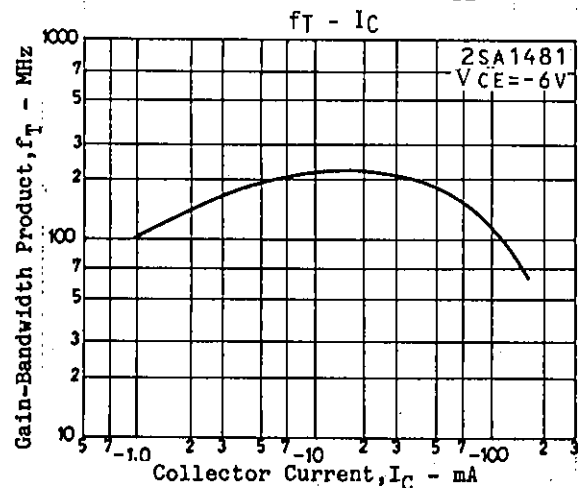
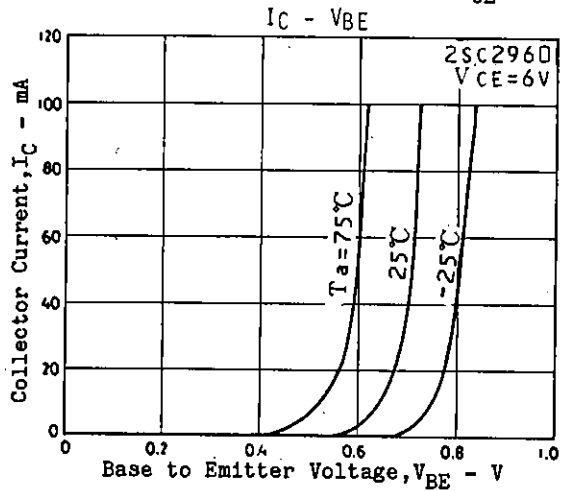
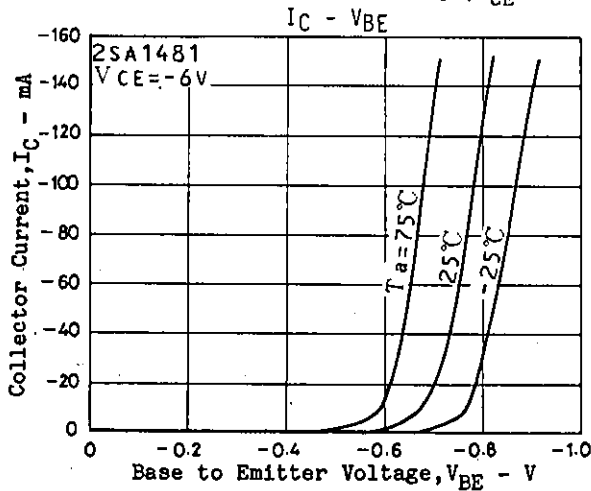
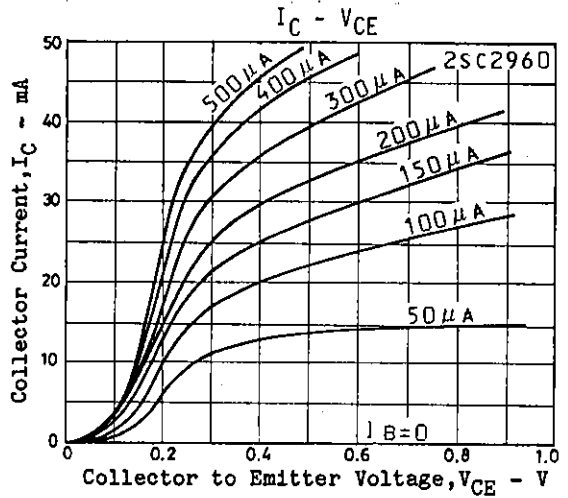
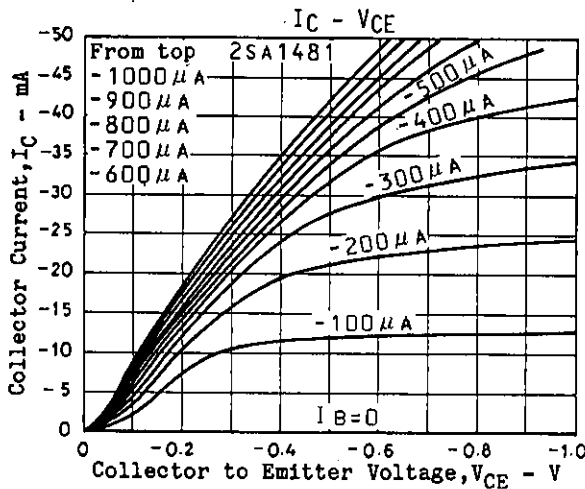
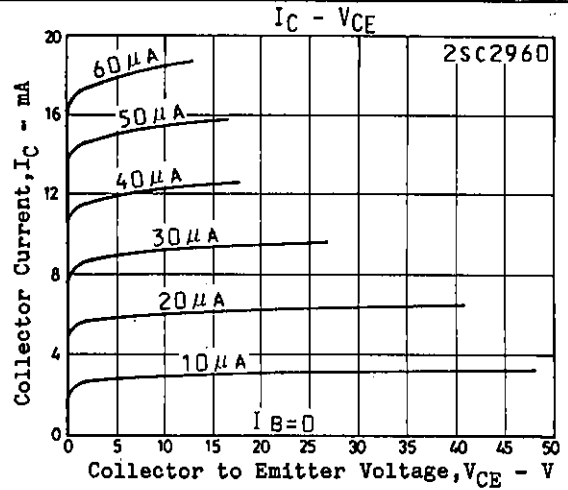
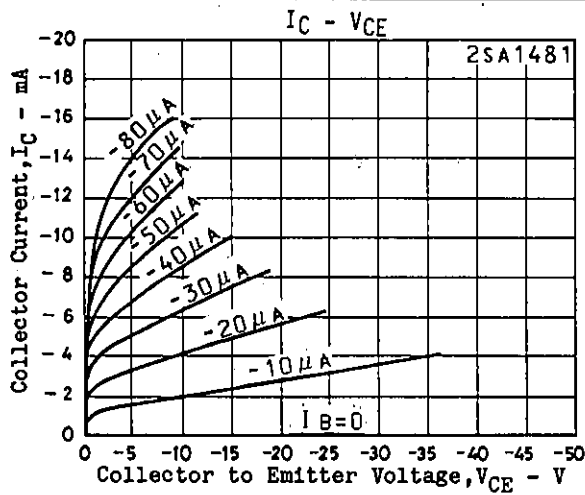
Package Dimensions 2033

(unit: mm)

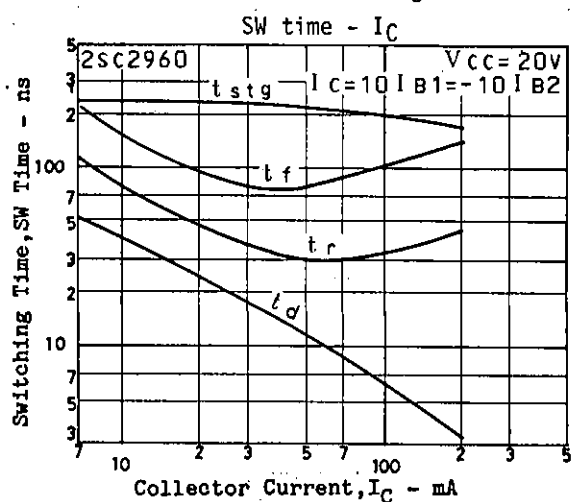
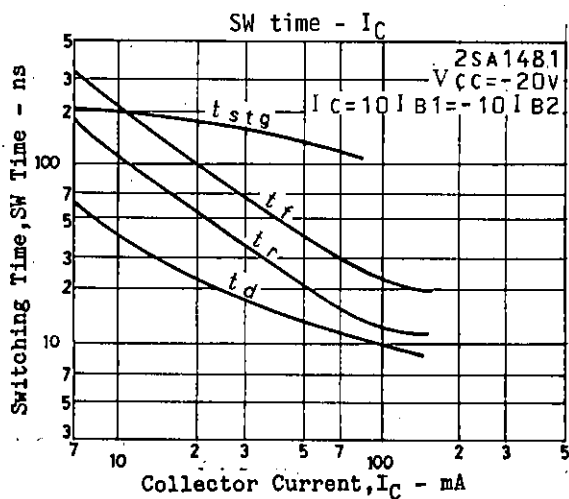
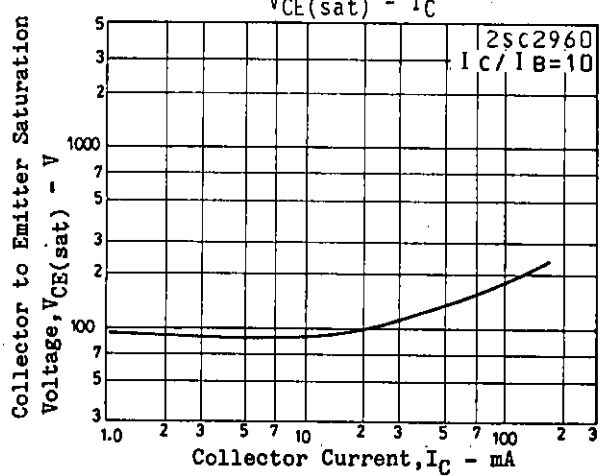
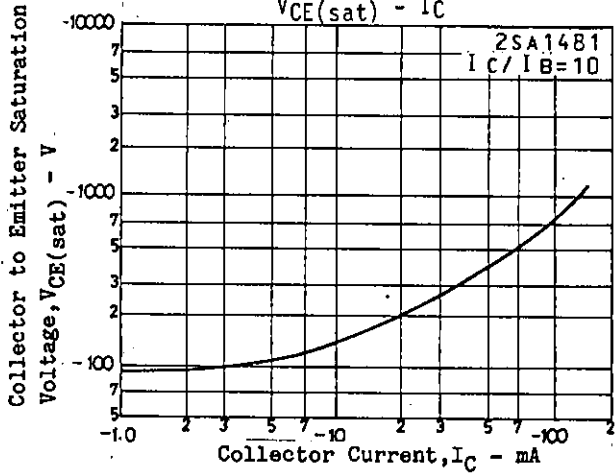
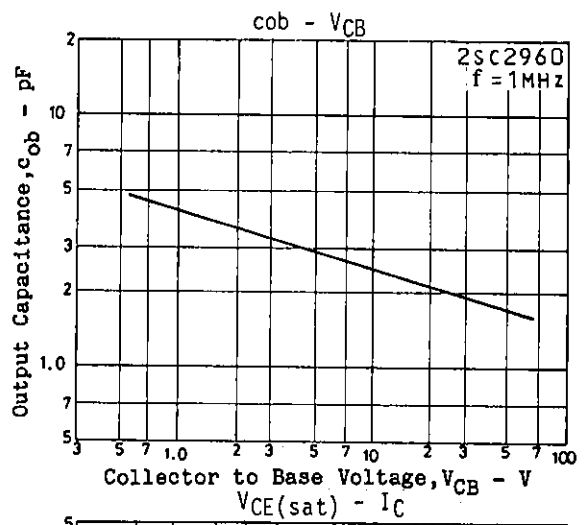
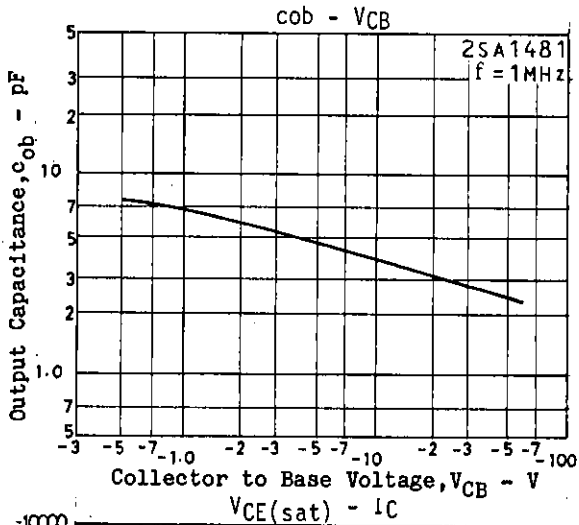
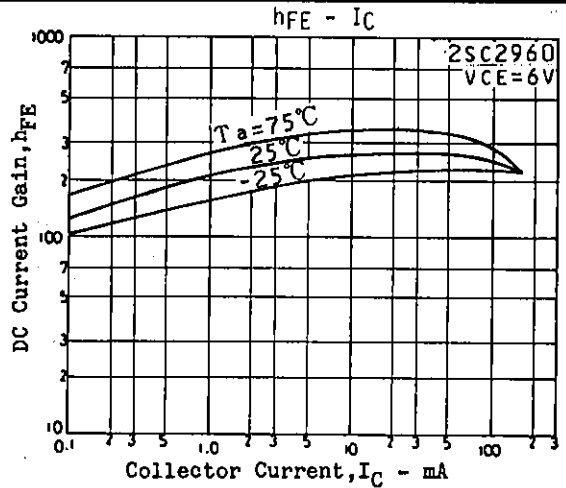
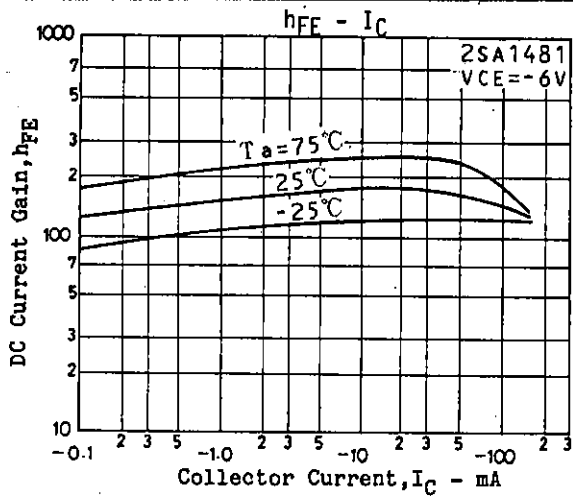


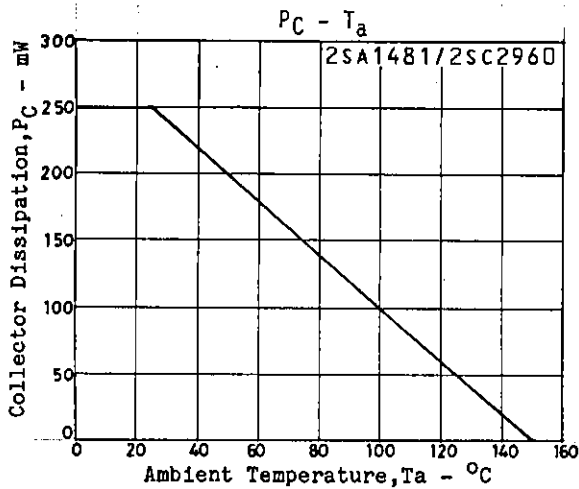
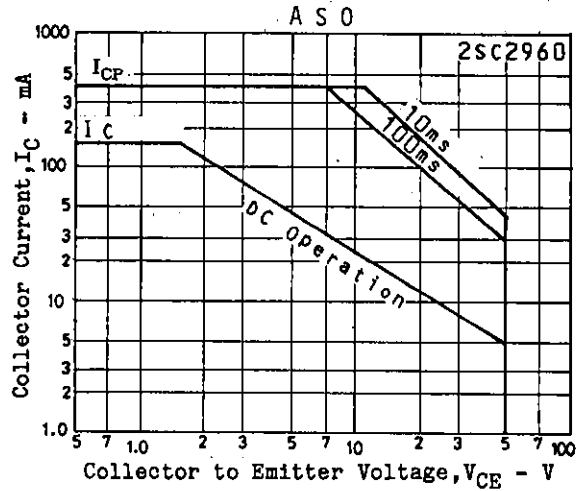
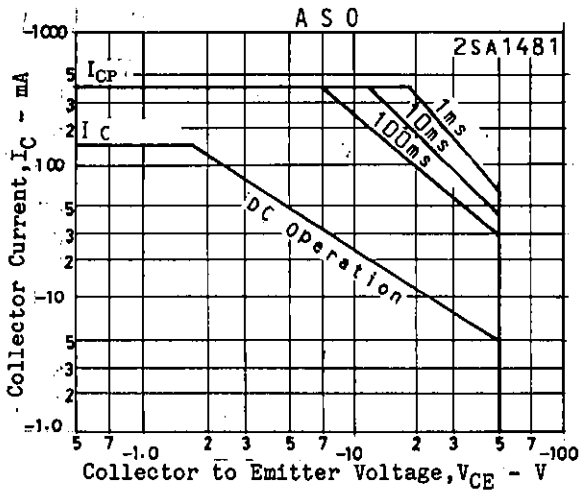
B: Base
C: Collector
E: Emitter

SANYO: SPA



2SA1481/2SC2960





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