Ordering number: EN2370

SANYO

No.2370

2SA1292/2SC3256

PNP/NPN Epitaxial Planar Silicon Transistors

60V/15A High-Speed Switching Applications

Applications

- Various inductance, lamp drivers for electrical equipment
- Inverters, converters (strobe, flash, fluorescent lamp lighting circuit)
- Power amp (high-power car stereo, motor control)
- High-speed switching (switching regulator, driver)

Features

- Low saturation voltage
- Excellect dependence of h_{FE} on current
- Fast switching time

( ): 2SA1292

Absolute Maximum Ratings at Ta=25°C

				unit
Collector-to-Base Voltage	V_{CBO}		(-)80	V
Collector-to-Emitter Voltage	V_{CEO}		(-)60	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)15	A
Collector Current (Pulse)	I_{CP}		(-)20	A
Collector Dissipation	P_C	Tc=25°C	80	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}=(-)40V, I_E=0			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)4V, I_C=0			(-)0.1	mA
DC Current Gain	h_{FE}	V_{CE}=(-)2V, I_C=(-)1A	70*		280*	
Gain-Bandwidth Product	f_T	V_{CE}=(-)5V, I_C=(-)1A		100		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=(-)7.5A, I_B=(-)0.375A			(-)0.4	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=(-)1mA, I_E=0	(-)80			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=(-)1mA, R_{BE}=∞	(-)60			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=(-)1mA, I_C=0	(-)5			V

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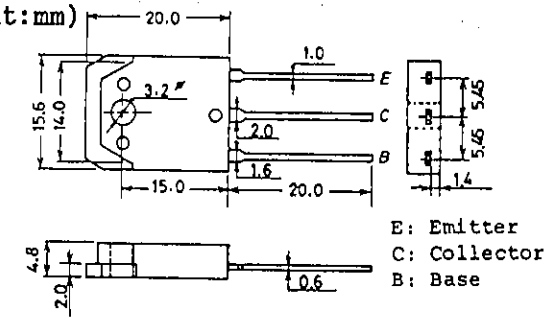
Package Dimensions 2022

(unit: mm)



E: Emitter
C: Collector
B: Base

SANYO Electric Co., Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

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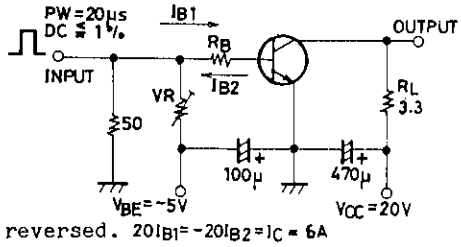
			min	typ	max	unit
Rise Time	t_{on}	See specified Test Circuit.		0.1		μs
Storage Time	t_{stg}	"		0.5		μs
Fall Time	t_f	"		0.1		μs

*: The 2SA1292/2SC3256 are classified by 1A h_{FE} as follows:

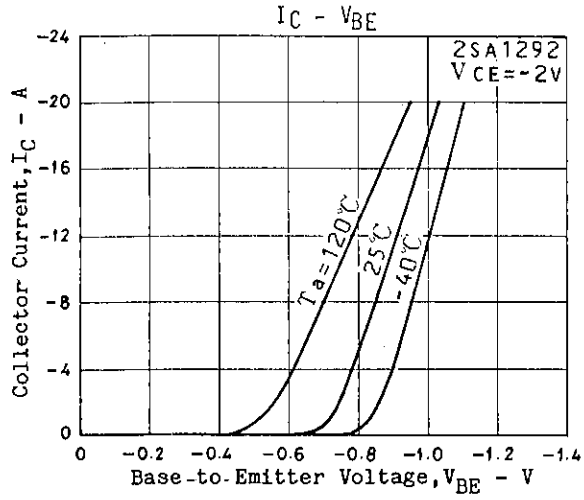
70 Q 140	100 R 200	140 S 280

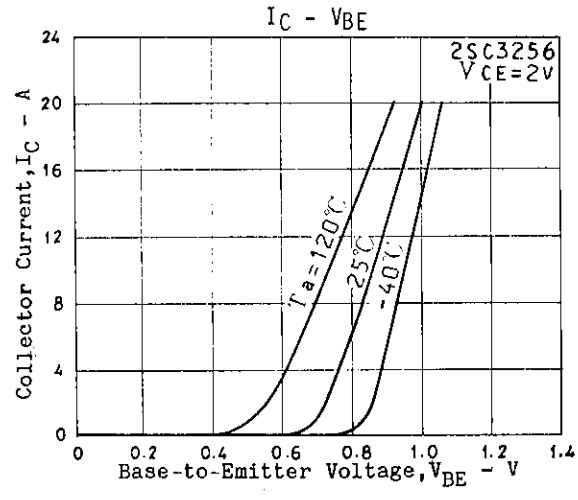
Switching Time Test Circuit

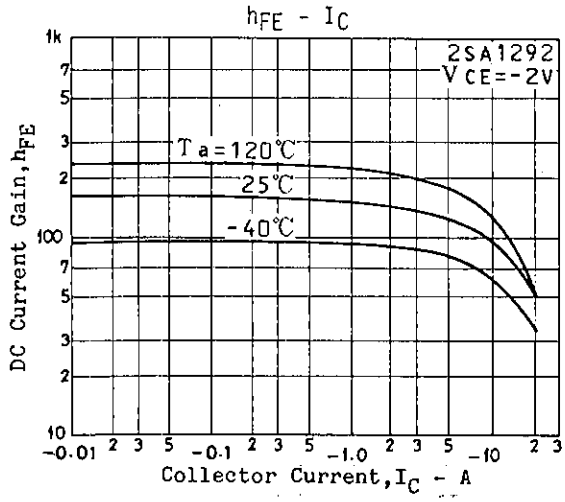


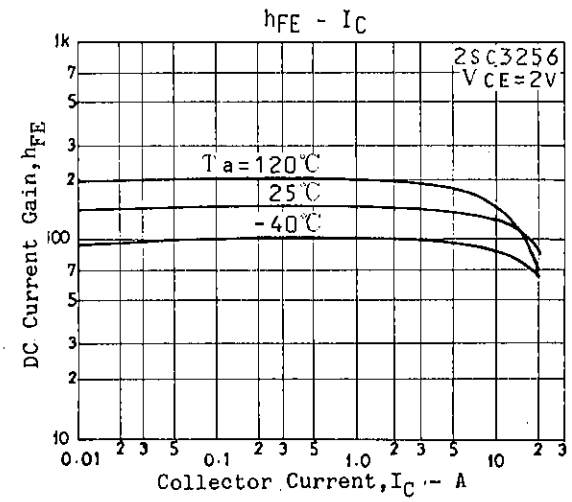
For PNP, the polarity is reversed. $20I_{B1}=-20I_{B2}=I_C=6A$

Unit (resistance: Ω, capacitance: F)

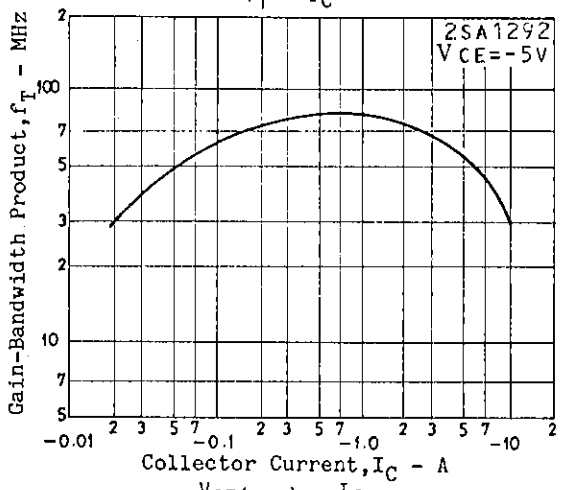




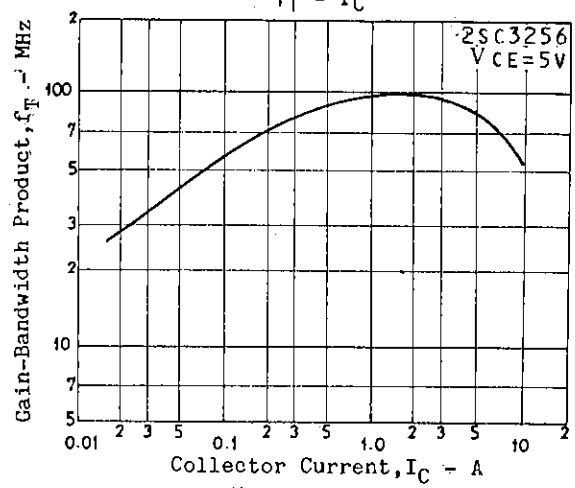




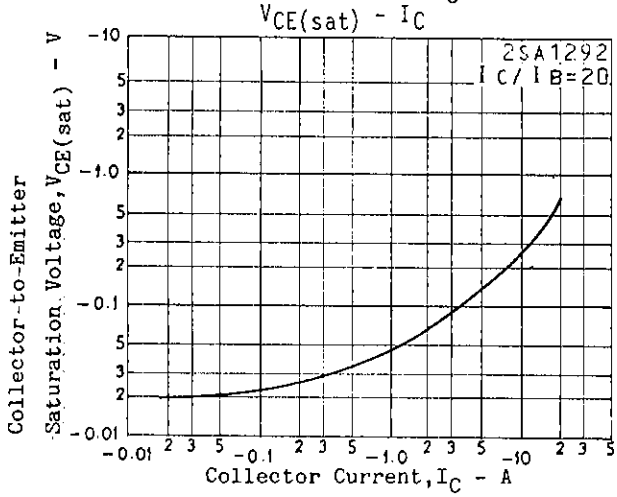
f_T - I_C



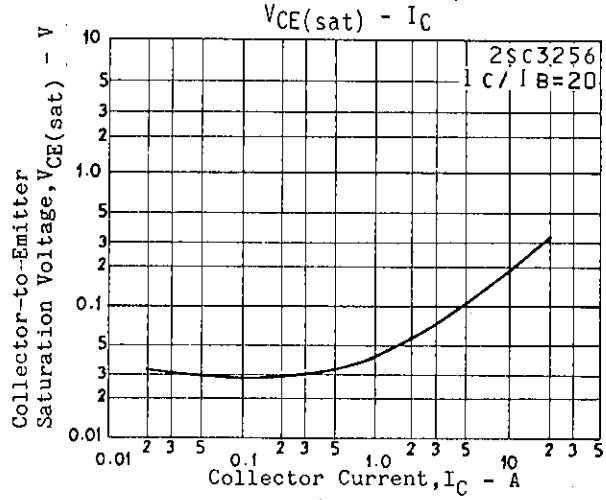
f_T - I_C



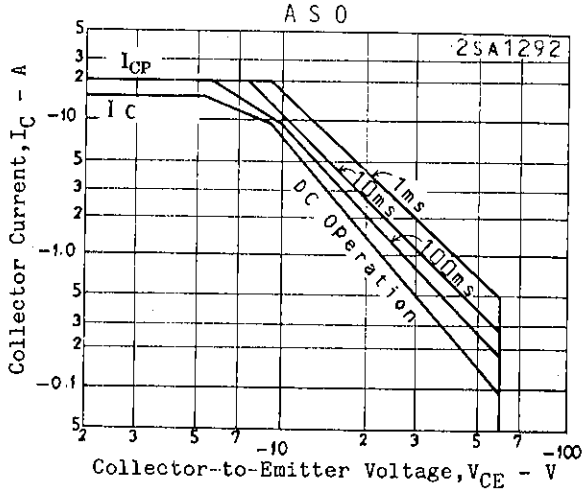
$V_{CE(sat)}$ - I_C



$V_{CE(sat)}$ - I_C



A S O



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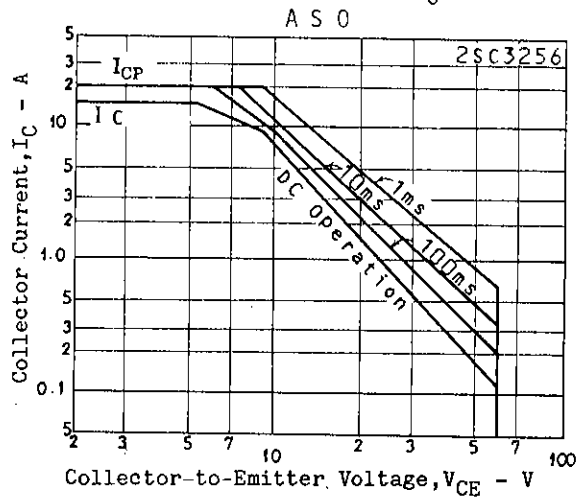

P_C - T_a