

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
- . Excellent dependence of h_{FE} on current
- . Fast switching time

(): 2SA1292

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

			unit
Collector-to-Base Voltage	V_{CB0}	(-)80	V
Collector-to-Emitter Voltage	V_{CE0}	(-)60	V
Emitter-to-Base Voltage	V_{EB0}	(-)5	V
Collector Current	I_C	(-)15	A
Collector Current (Pulse)	I_{CP}	(-)20	A
Collector Dissipation	P_C	80	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

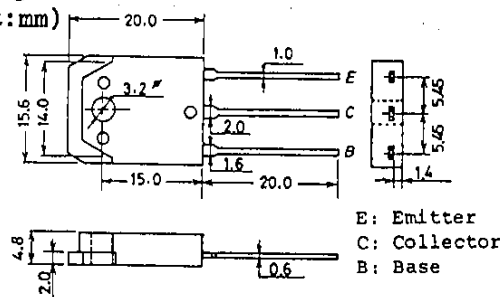
 $T_c=25^\circ\text{C}$ **Electrical Characteristics at $T_a=25^\circ\text{C}$**

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=(-)40\text{V}, I_E=0$			(-)0.1	mA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=(-)4\text{V}, I_C=0$			(-)0.1	mA
DC Current Gain	h_{FE}	$V_{CE}=(-)2\text{V}, I_C=(-)1\text{A}$	70*		280*	
Gain-Bandwidth Product	f_T	$V_{CE}=(-)5\text{V}, I_C=(-)1\text{A}$		100		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)7.5\text{A}, I_E=(-)0.375\text{A}$			(-)0.4	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)1\text{mA}, I_E=0$	(-)80			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1\text{mA}, R_{BE}=\infty$	(-)60			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)1\text{mA}, I_C=0$	(-)5			V

Continued on next page.

Package Dimensions 2022

(unit:mm)

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

5137TA, TS No.2370-1/4

2SA1292/2SC3256

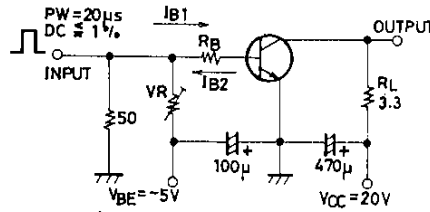
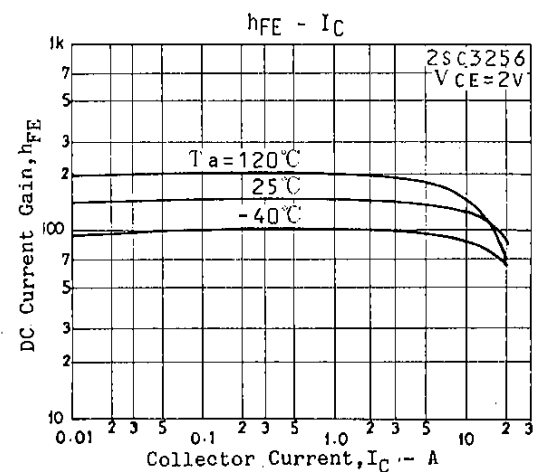
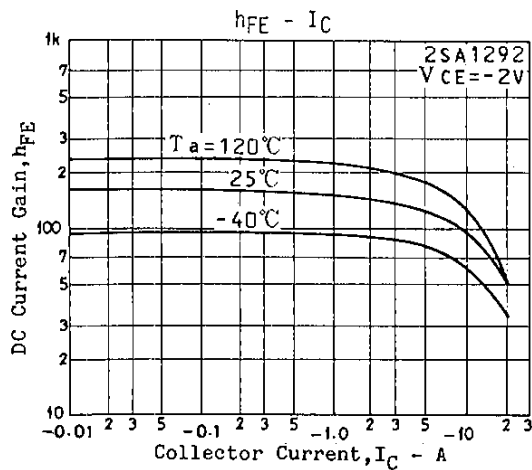
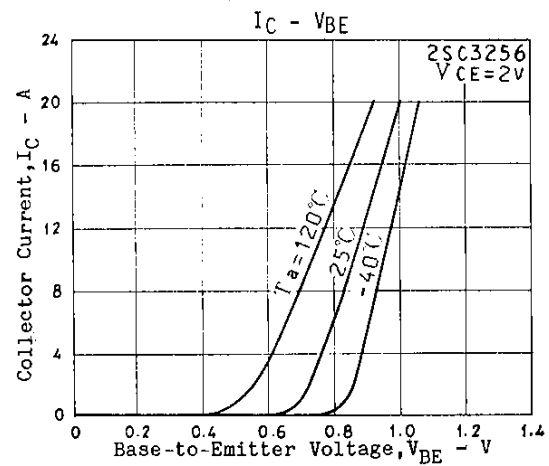
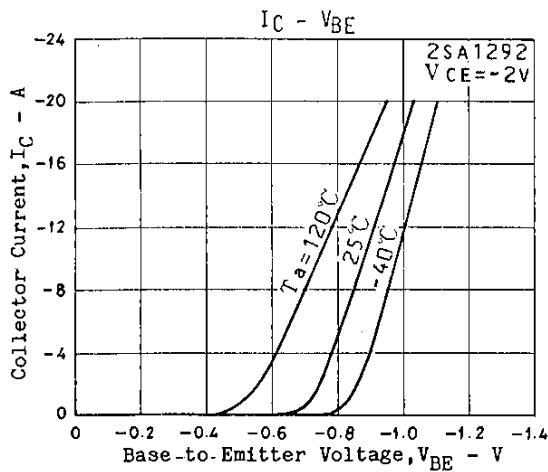
Continued from preceding page.

			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

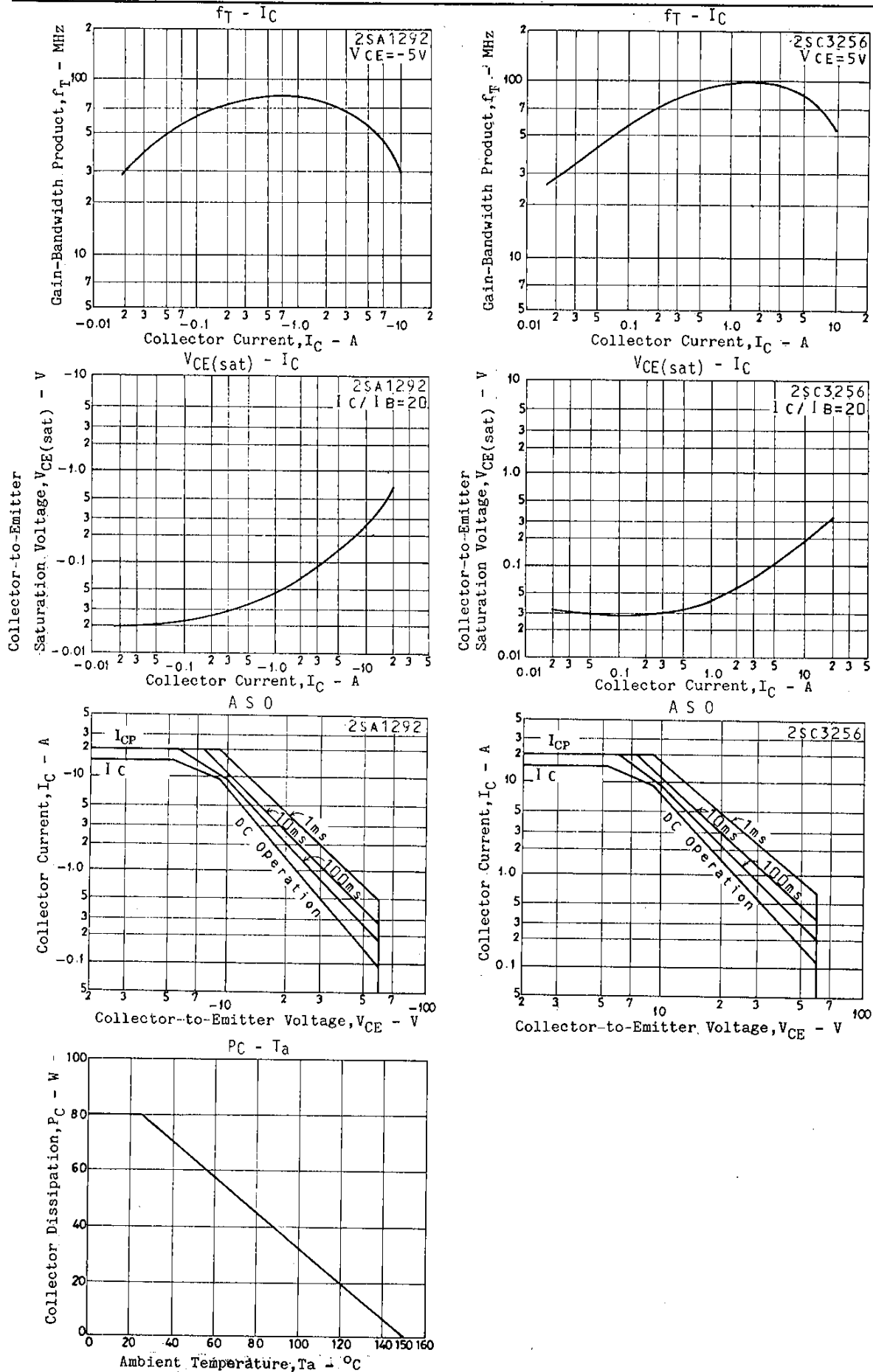
*: The 2SA1292/2SC3256 are classified by 1A h_{FE} as follows:

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)

2SA1292/2SC3256



2SA1292/2SC3256

- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.