

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	$^\circ\text{C}$

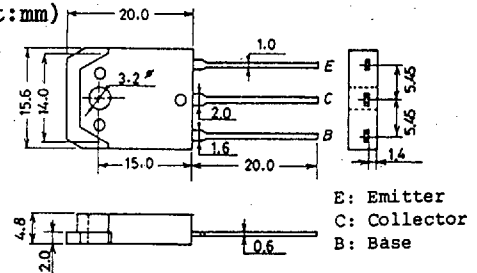
Electrical Characteristics at $T_a=25^\circ\text{C}$

			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	$V_{CE(sat)}$	$I_C=(-)7.5\text{A}, I_B=(-)0.375\text{A}$			(-)0.4	V
C-B Breakdown Voltage	$V_{(BR)CB0}$	$I_C=(-)1\text{mA}, I_E=0$		(-)80		V
C-E Breakdown Voltage	$V_{(BR)CE0}$	$I_C=(-)1\text{mA}, R_{BE}=\infty$		(-)60		V
E-B Breakdown Voltage	$V_{(BR)EB0}$	$I_E=(-)1\text{mA}, I_C=0$		(-)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

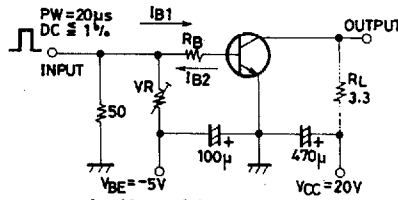
Continued from preceding page.

			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)