

**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	$V_{CBO}$	(-)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	$P_C$	80	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

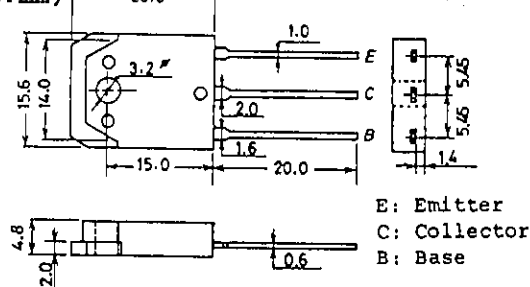
**Electrical Characteristics at  $T_a=25^\circ\text{C}$** 

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)40\text{V}, I_E=0$			(-)0.1	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)4\text{V}, I_C=0$			(-)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	$V_{(BR)CBO}$	$I_C=(-)1\text{mA}, I_E=0$	(-)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

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**Package Dimensions 2022**

(unit:mm)



E: Emitter  
C: Collector  
B: Base

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5137TA, TS No.2370-1/4

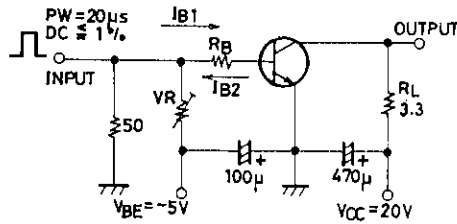
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			min	typ	max	unit
Rise Time	$t_{on}$	See specified Test Circuit.		0.1		$\mu s$
Storage Time	$t_{stg}$			0.5		$\mu s$
Fall Time	$t_f$			0.1		$\mu s$

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

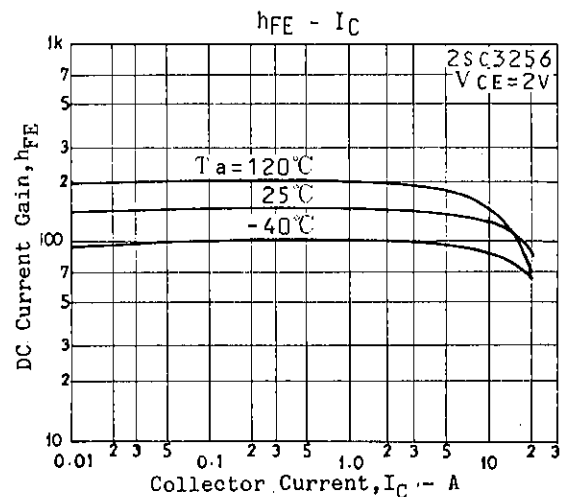
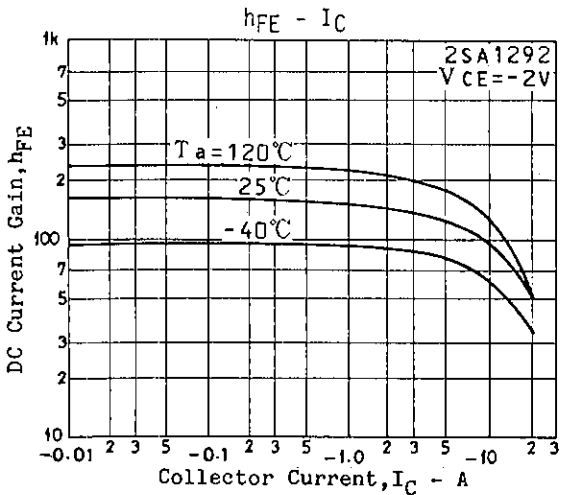
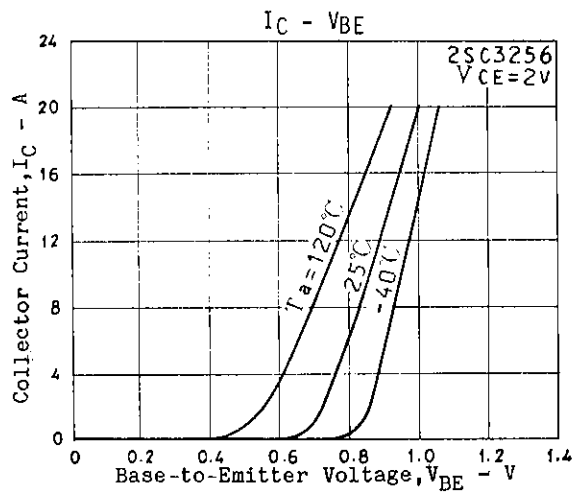
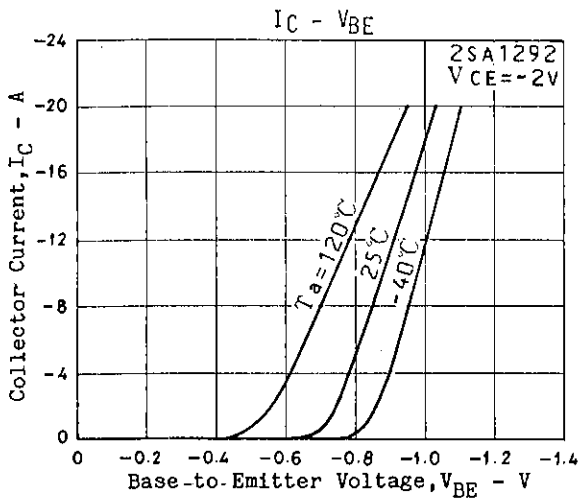
70	Q	140	100	R	200	140	S	280
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Switching Time Test Circuit

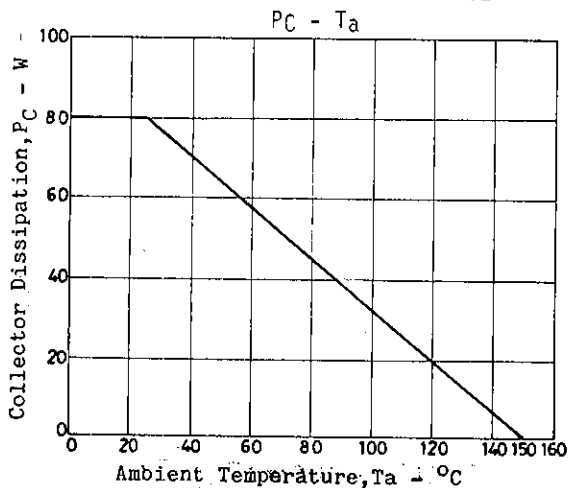
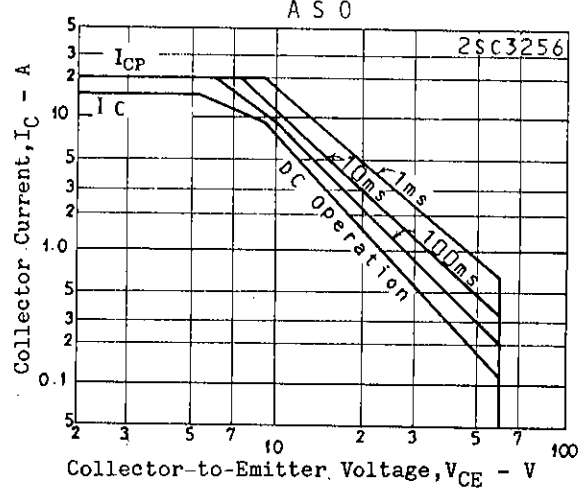
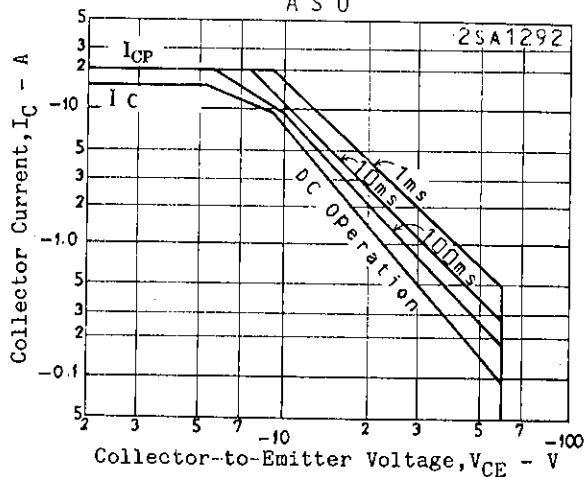
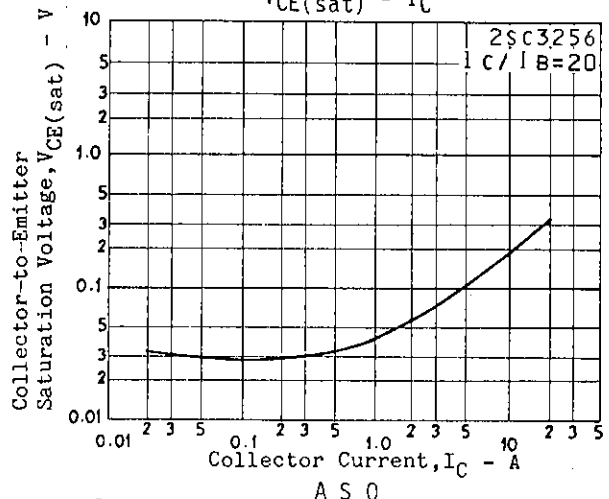
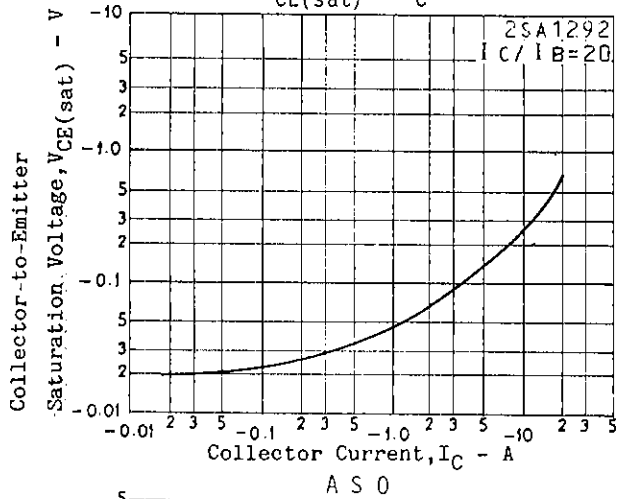
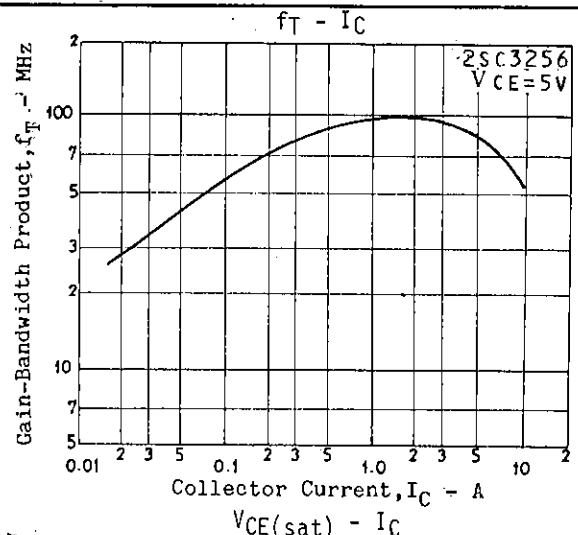
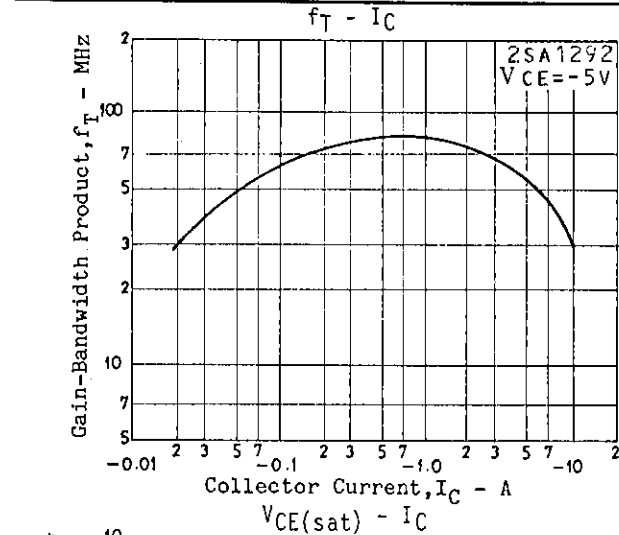


For PNP, the polarity is reversed.  $20I_{B1} = -20I_{B2} = I_C = 6A$

Unit (resistance:  $\Omega$ , capacitance: F)



2SA1292/2SC3256



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