

SANYO

No.1972A

2SA1470/2SC3747

PNP/NPN Epitaxial Planar Silicon Transistors

60V/7A High-Speed Switching Applications**Applications**

- . Inductance, lamp drivers.
- . Inverters, converters (strobos, flashes, FLT lighting circuits).
- . Power amplifiers (high-power car stereos, motor control).
- . High-speed switching (switching regulators, drivers).

Features

- . Low saturation voltage.
- . Excellent dependence of h_{FE} on current.
- . Fast switching time.
- . Micaless package facilitating mounting

(): 2SA1470

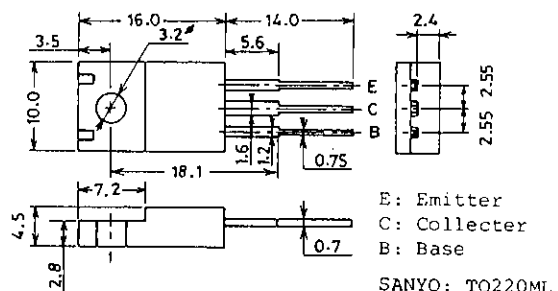
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

			unit
Collector-to-Base Voltage	V_{CB0}	(-)80	V
Collector-to-Emitter Voltage	V_{CEO}	(-)60	V
Emitter-to-Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)7	A
Collector Current (Pulse)	I_{CP}	(-)10	A
Collector Dissipation	P_C	2	W
		$T_c=25^\circ\text{C}$	25
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_{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
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)3.5\text{A}, I_B=(-)0.175\text{A}$		(-)0.4		V

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**Package Dimensions 2041
(unit:mm)**

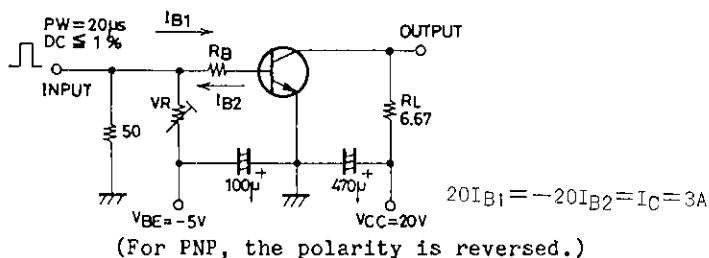
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			min	typ	max	unit
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1mA, I_E = 0$	(-)80			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)60			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)1mA, I_C = 0$	(-)5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		0.1		μs
Storage Time	t_{stg}	"		0.5		μs
Fall Time	t_f	"		0.1		μs

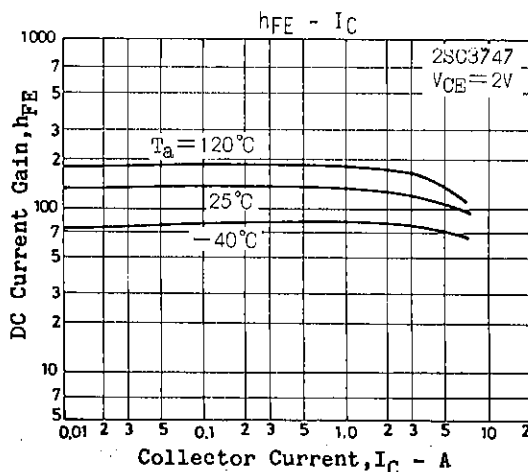
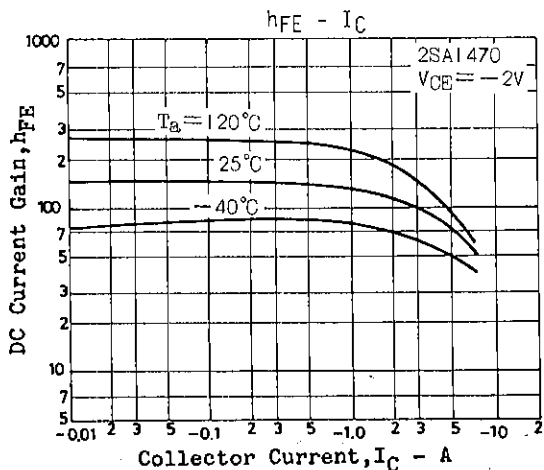
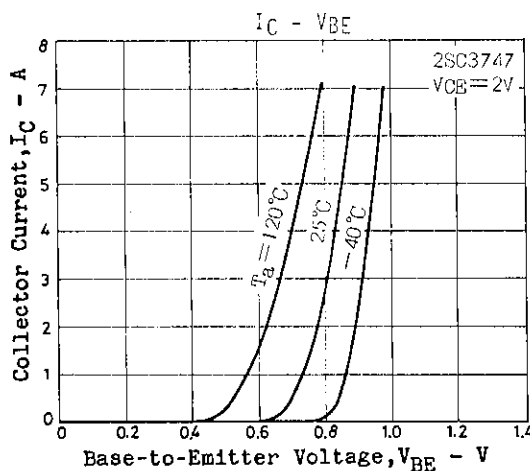
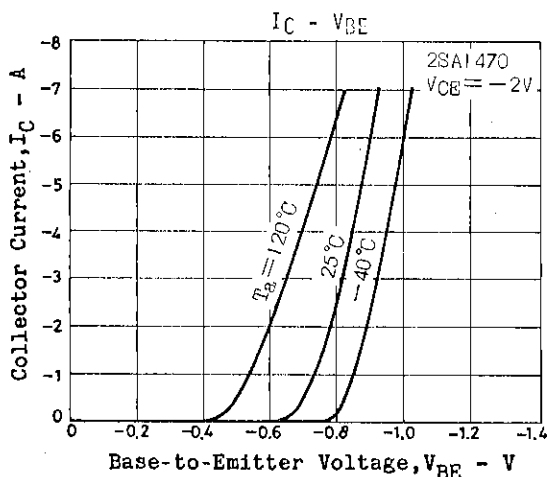
*: The 2SA1470/2SC3747 are classified by 1A h_{FE} as follows:

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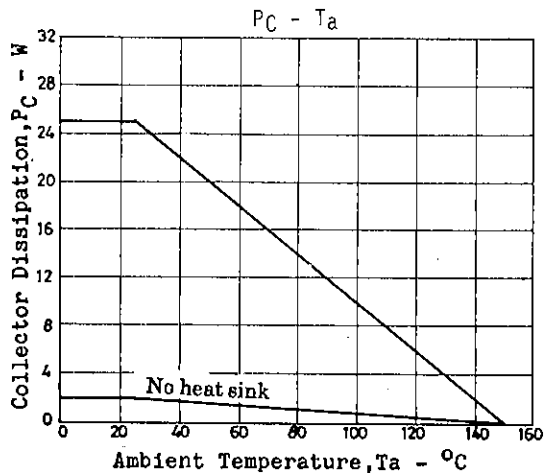
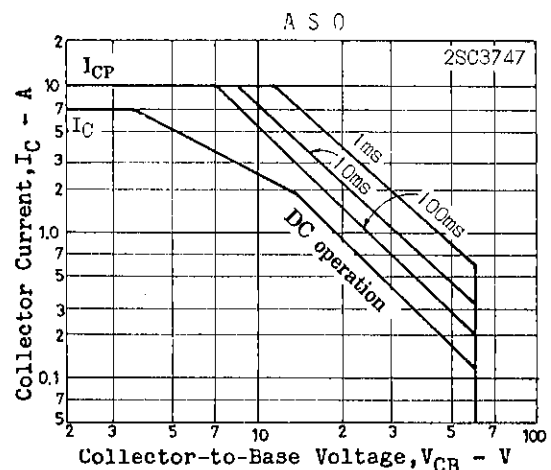
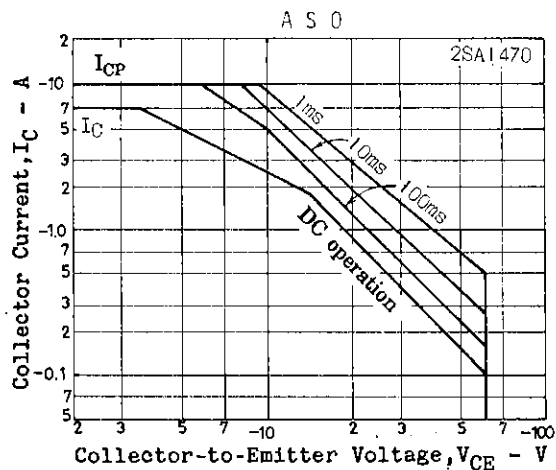
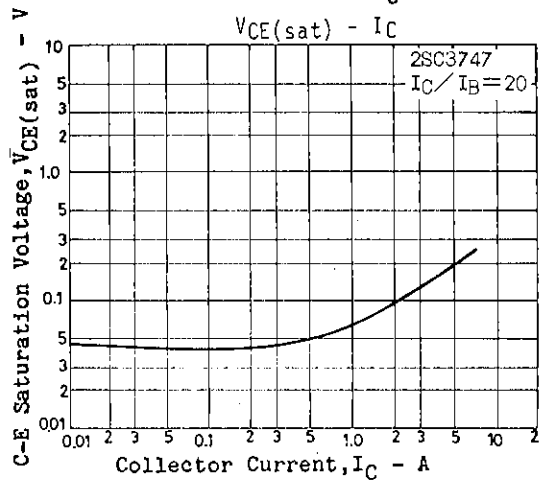
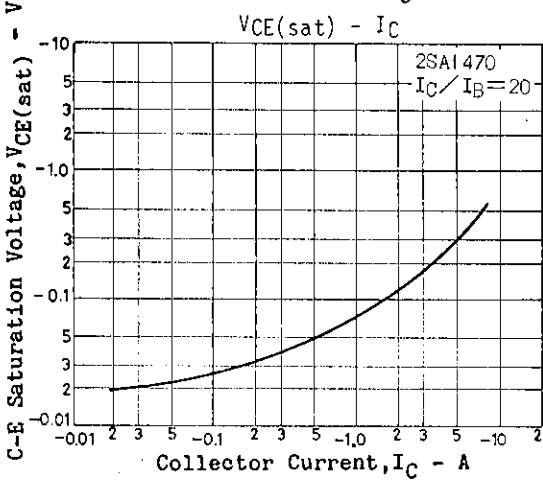
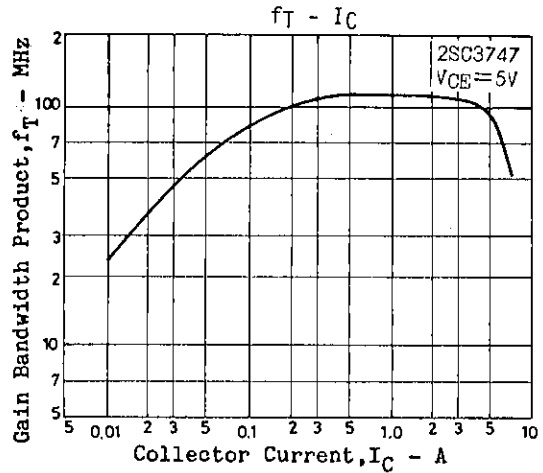
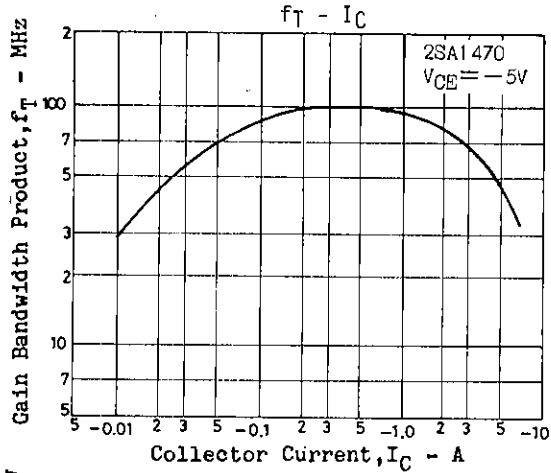
Switching Time Test Circuit



Unit (resistance: Ω , capacitance: F)



2SA1470/2SC3747



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