

SANYO	No.1973A	2SA1469/2SC3746
		PNP/NPN Epitaxial Planar Silicon Transistors 60V/5A High-Speed Switching Applications

Applications

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

Features

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

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

Collector-to-Base Voltage	V_{CB0}	(-)80	V	unit
Collector-to-Emitter Voltage	V_{CE0}	(-)60	V	
Emitter-to-Base Voltage	V_{EB0}	(-)5	V	
Collector Current	I_C	(-)5	A	
Collector Current (Pulse)	I_{CP}	(-)7	A	
Collector Dissipation	P_C	2	W	
		20	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_{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	$V_{CE(sat)}$	$I_C = (-)2.5\text{A}, I_B = (-)0.125\text{A}$			(-)0.4	V

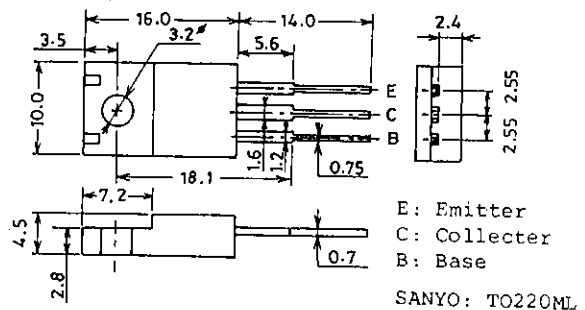
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* : The 2SA1469/2SC3746 are classified by 1A h_{FE} as follows

70	Q	140	100	R	200	140	S	280
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Package Dimensions 2041

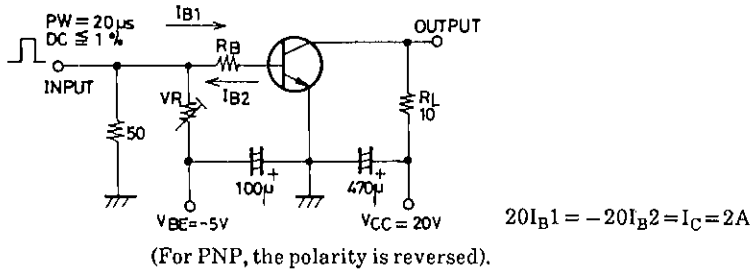
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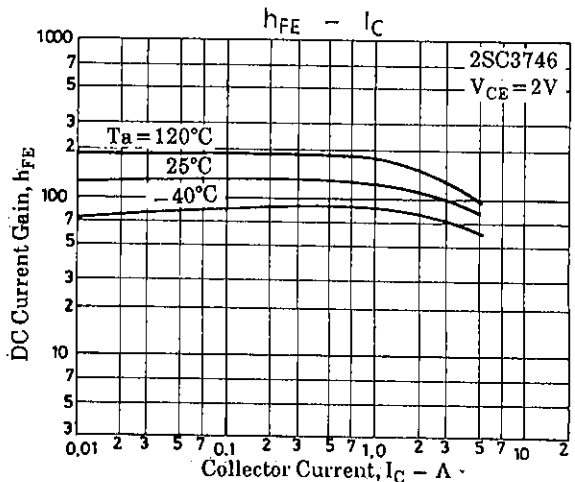
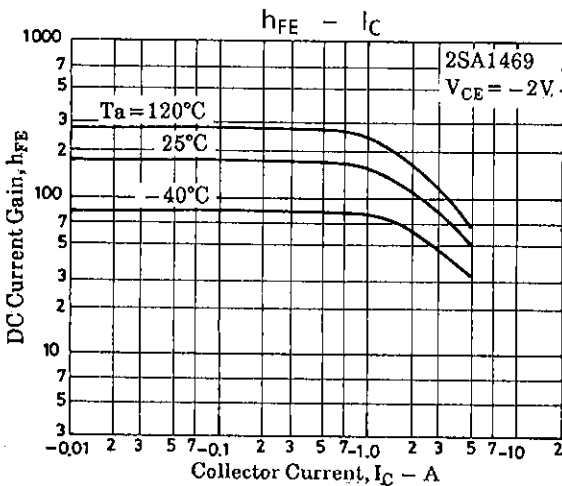
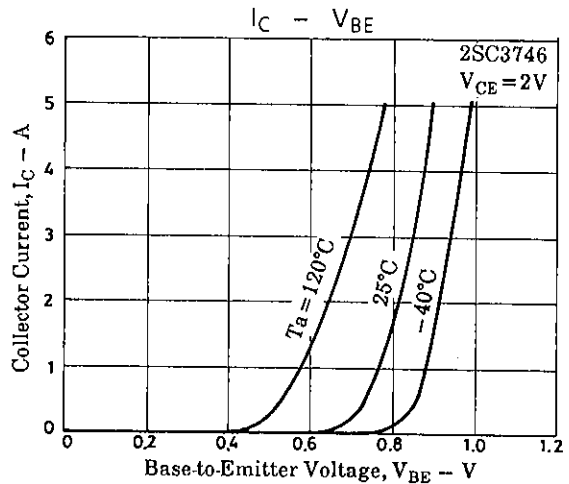
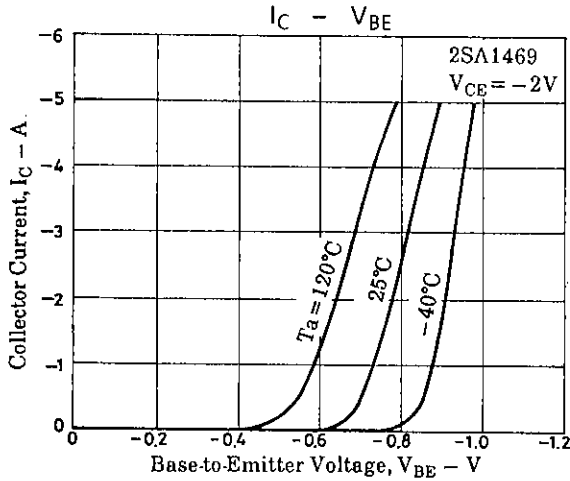
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			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1mA, I_E = 0$	(-)80			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)60			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)1mA, I_C = 0$	(-)5			V
Turn-on Time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

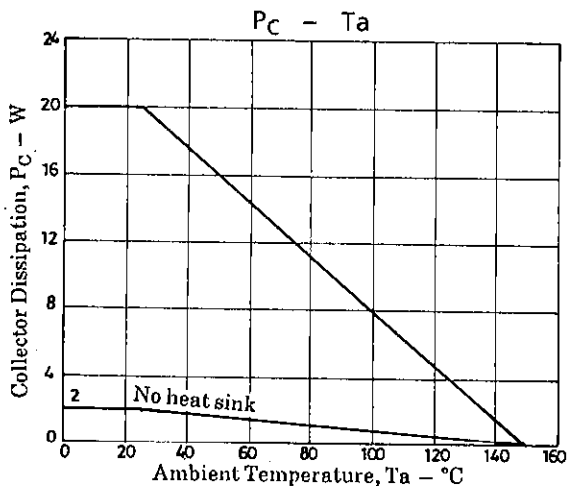
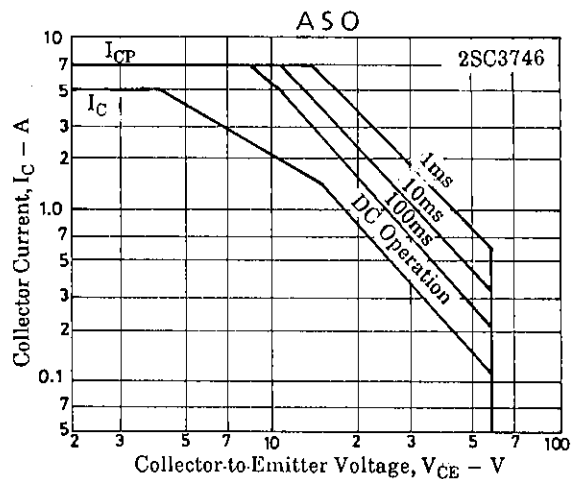
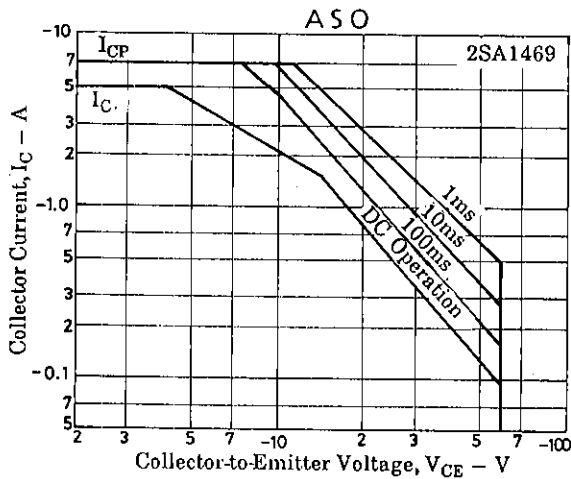
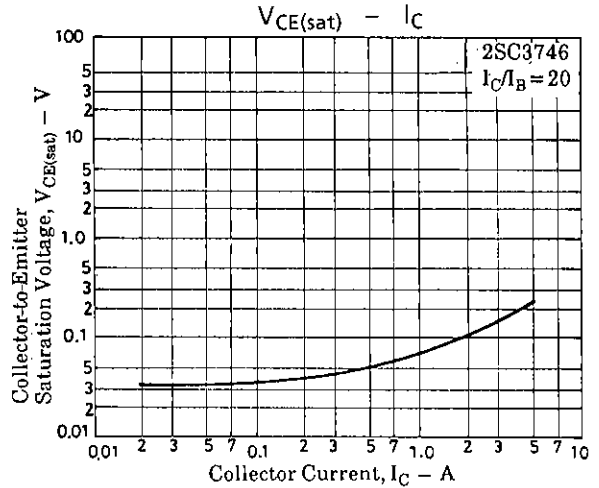
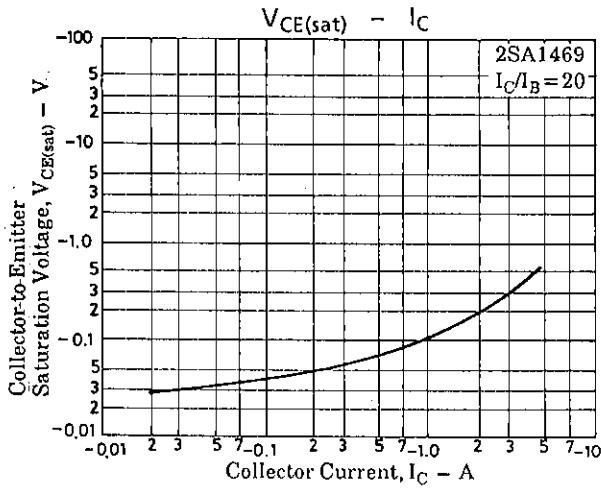
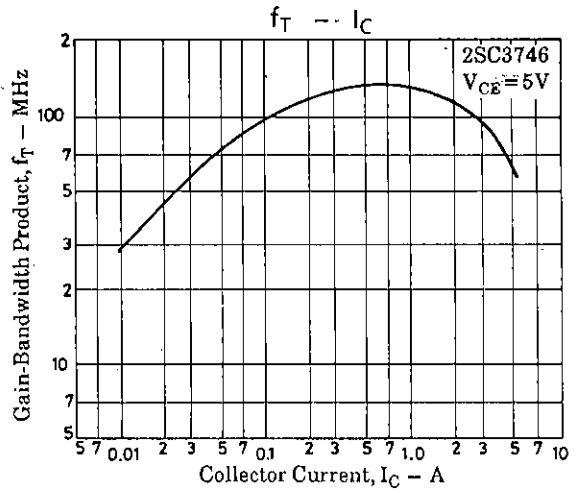
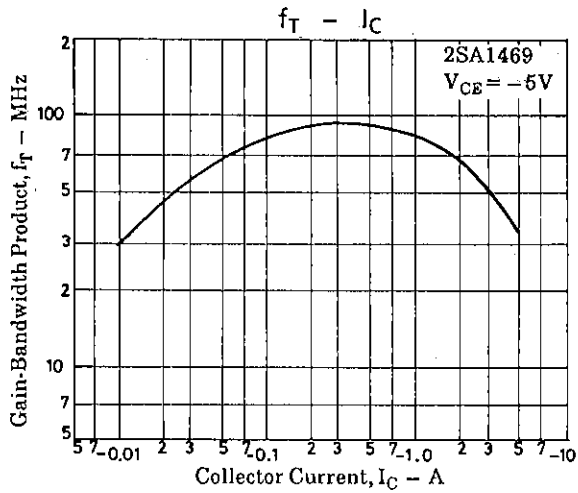
Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)



2SA1469/2SC3746



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