

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.

() : 2SA1469

Specifications

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

Parameter	Symbol	Conditions	Ratings	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		(-5)	A
Collector Current (Pulse)	I_{CP}		(-7)	A
Collector Dissipation	P_C	$T_c=25^\circ C$	2	W
Junction Temperature	T_J		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB} = (-)40V, I_E = 0$			(-0.1)	mA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = (-)4V, I_C = 0$			(-0.1)	mA
DC Current Gain	h_{FE}	$V_{CE} = (-)2V, I_C = (-)1A$	70*		280*	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		100		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)2.5A, I_B = (-)0.125A$			(-0.4)	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10mA, I_E = 0$	(-80)			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-60)			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10mA, I_C = 0$	(-5)			V
Turn-ON Time	t_{on}	See specified Test Circuit		0.1		μs
Storage Time	t_{stg}	See specified Test Circuit		0.5		μs
Fall Time	t_f	See specified Test Circuit		0.1		μs

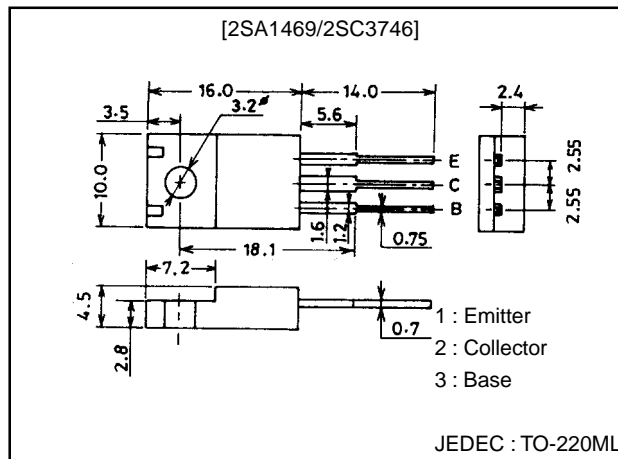
* : The 2SA1469/2SC3746 are classified by 1A h_{FE} as follows

70	Q	140	100	R	200	140	S	280
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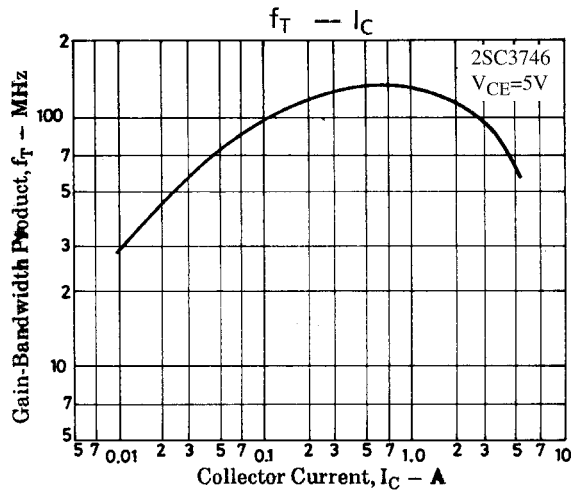
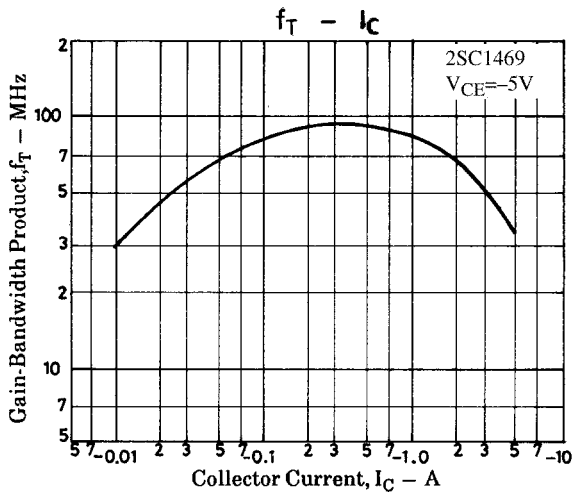
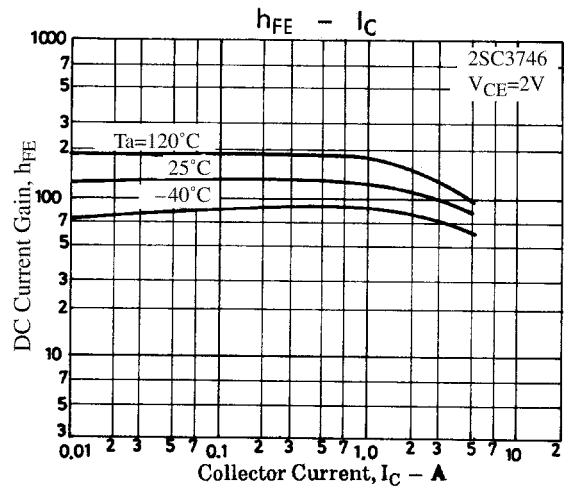
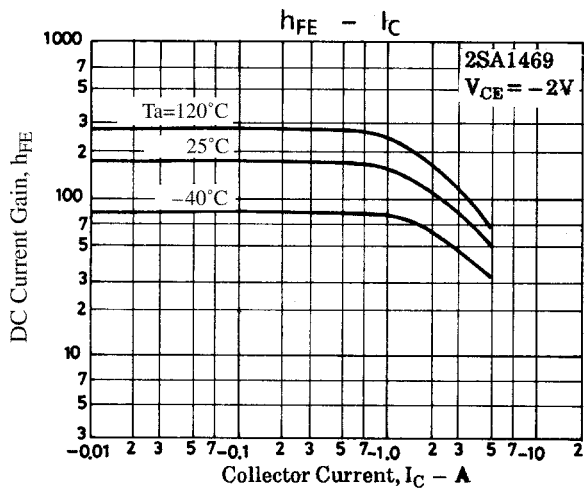
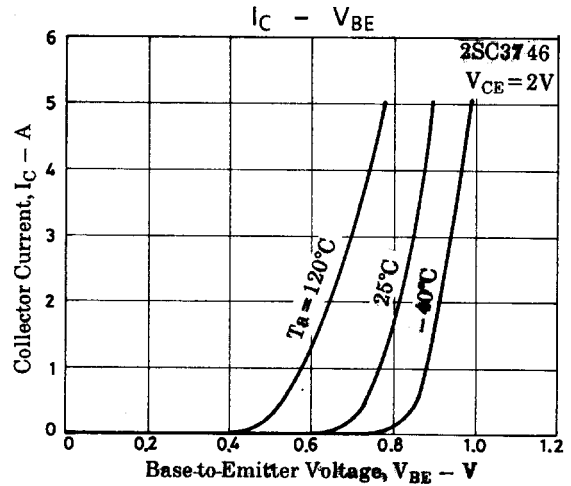
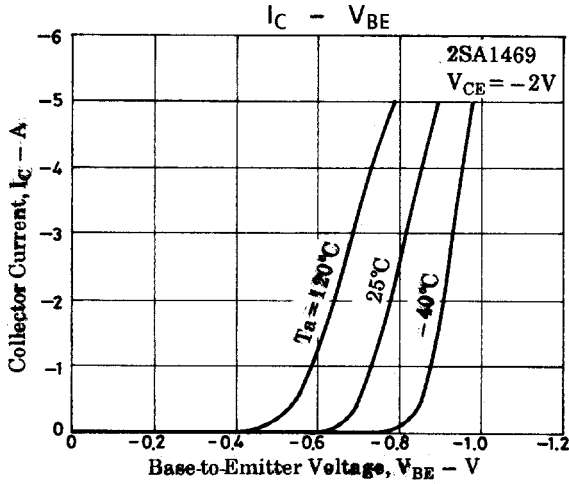
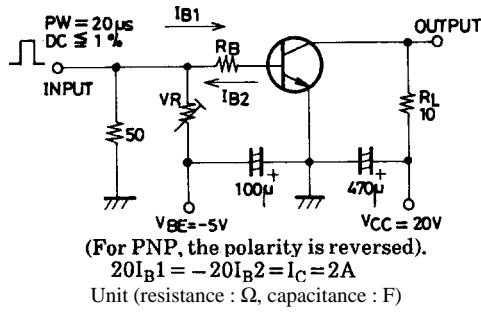
Package Dimensions

unit:mm

2041



Switching Time Test Circuit



2SA1469/2SC3746

