Ordering number:EN1973A

PNP/NPN Epitaxial Planar Silicon Transistors

2SA1469/2SC3746

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

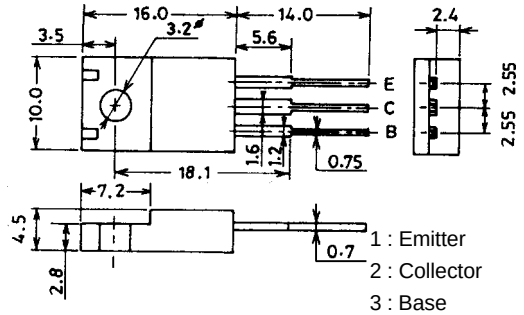
- Low saturation voltage.
- Excellent current dependence of h_{FE}.
- Short switching time.
- Micaless package facilitating mounting.

Package Dimensions

unit:mm

2041

[2SA1469/2SC3746]



JEDEC : TO-220ML

( ) : 2SA1469

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	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		(–)5	A
Collector Current (Pulse)	I_{CP}		(–)7	A
Collector Dissipation	P_C		2	W
		Tc=25˚C	20	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(–)40V, I_E=0			(–)0.1	mA
Emitter Cutoff Current	I_{EBO}	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}=∞	(–)60			V
Emitter-to-Base Breakdown Votage	$V_{(BR)EBO}$	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

SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters

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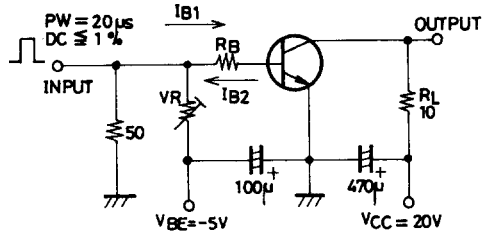
Switching Time Test Circuit



(For PNP, the polarity is reversed).
$20I_B1 = -20I_B2 = I_C = 2A$
Unit (resistance : Ω, capacitance : F)