

Silicon PNP Power Transistors

2SA1469

DESCRIPTION

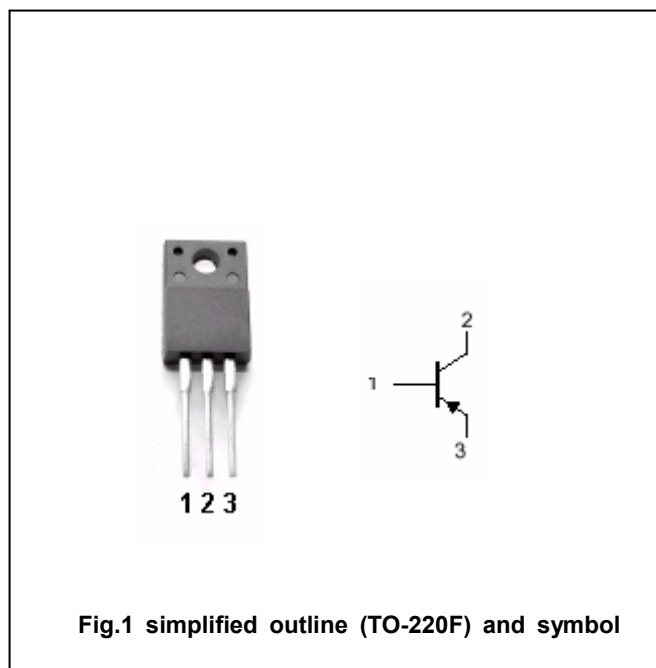
- With TO-220F package
- Complement to type 2SC3746
- Low saturation voltage
- Excellent current dependence of h_{FE}
- Short switching time

APPLICATIONS

- Various inductance of lamp drivers for electrical equipment
- Inverters ,converters
- Power amplification
- Switching regulator ,driver

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-80	V
V_{CEO}	Collector-emitter voltage	Open base	-60	V
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current		-5	A
I_{CM}	Collector current-peak		-7	A
P_C	Collector power dissipation	$T_a=25^\circ\text{C}$	2	W
		$T_C=25^\circ\text{C}$	20	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1\text{mA}$; $R_{BE} = \infty$	-60			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -10\text{mA}$; $I_E = 0$	-80			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -10\text{mA}$; $I_C = 0$	-5			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C = -2.5\text{A}$; $I_B = -0.125\text{A}$			-0.4	V
I_{CBO}	Collector cut-off current	$V_{CB} = -40\text{V}$; $I_E = 0$			-0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB} = -4\text{V}$; $I_C = 0$			-0.1	mA
h_{FE}	DC current gain	$I_C = -1\text{A}$; $V_{CE} = -2\text{V}$	70		280	
f_T	Transition frequency	$I_C = -1\text{A}$; $V_{CE} = -5\text{V}$		100		MHz

Switching times

t_{on}	Turn-on time	$I_C = -2.0\text{A}$; $I_{B1} = -I_{B2} = -0.1\text{A}$ $V_{CC} = 20\text{V}$, $R_L = 10\Omega$		0.1		μs
t_s	Storage time			0.5		μs
t_f	Fall time			0.1		μs

◆ h_{FE} Classifications

Q	R	S
70-140	100-200	140-280

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Technical drawing showing three views of a vertical component with the following dimensions:

- Front View:**
 - Overall width: $10.00^{+0.10}_0$
 - Top flange width: 6.50
 - Top flange height: 5.00
 - Central hole diameter: $\phi 3.20$
 - Two side holes: $2-\phi 1.20$ and $2-\phi 1.50$
 - Vertical positions: 0.00, 1.80, 2.80, 5.00, 15.00
 - Bottom flange width: 1.20
 - Bottom flange height: 0.80 $^{0}_{-0.05}$
 - Bottom flange spacing: 5.10
- Side View:**
 - Top flange thickness: 4.50
 - Top flange width: 2.75
 - Top flange offset: 1.40
 - Top flange height: 5.00
 - Main body height: 15.00
 - Main body width: 2.30
 - Bottom flange width: 0.60
- Top View:**
 - Overall width: 6.50
 - Overall height: 15.00 ± 0.05
 - Top flange height: 1.80
 - Top flange width: 2.75
 - Top flange offset: 1.40
 - Top flange height: 5.00

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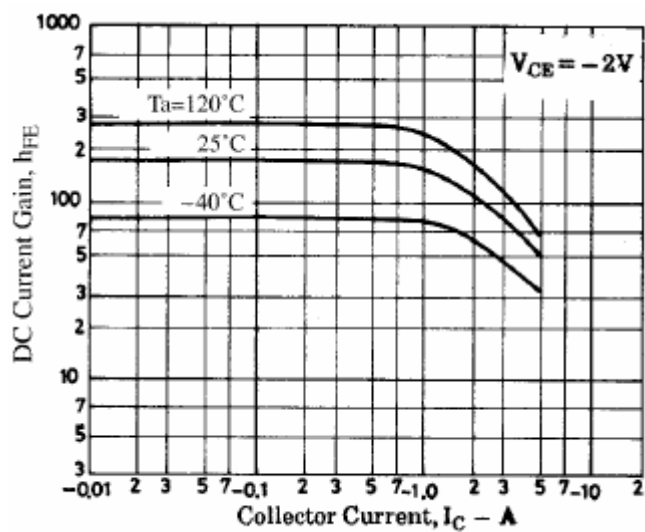


Fig.3 DC current Gain

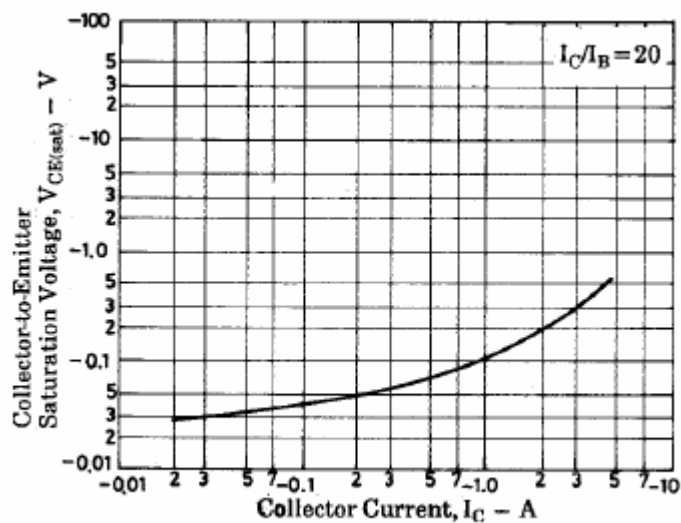


Fig.4 Collector-Emitter Saturation Voltage

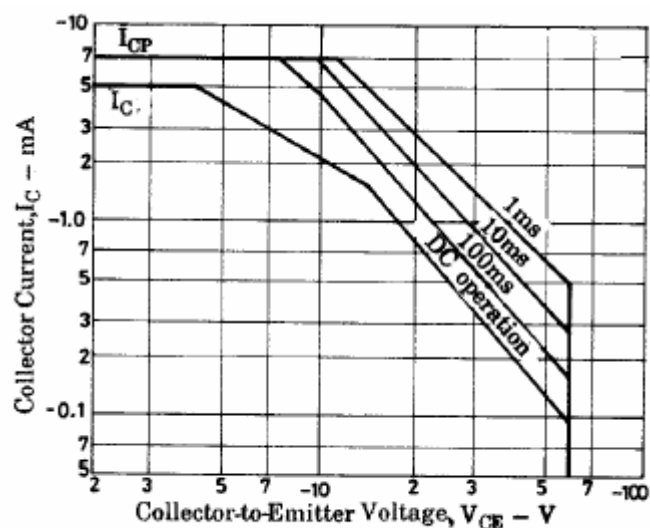


Fig.5 Safe Operating Area