Ordering number:EN2911

PNP Epitaxial Planar Silicon Transistor

2SB1396

DC-DC Converter, Motor Driver Applications

Features

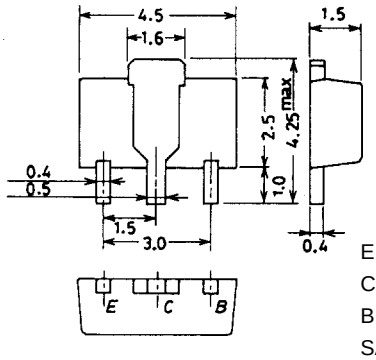
- Adoption of FBET, MBIT processes.
- Large current capacity.
- Low collector-to-emitter saturation voltage.
- Small size making it easy to provide high-density, small-sized hybrid ICs.

Package Dimensions

unit:mm

2038

[2SB1396]



E : Emitter
C : Collector
B : Base
SANYO : PCP
(Bottom view)

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		–15	V
Collector-to-Emitter Voltage	V_{CEO}		–10	V
Emitter-to-Base Voltage	V_{EBO}		–7	V
Collector Current	I_C		–3	A
Collector Current (Pulse)	I_{CP}		–5	A
Collector Dissipation	P_C	Mounted on ceramic PCB (250mm²×0.8mm)	1.3	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}=–12V, I_E=0			–100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=–6V, I_C=0			–100	nA
DC Current Gain	$h_{FE}1$	V_{CE}=–2V, I_C=–0.5A	140*		560*	
	$h_{FE}2$	V_{CE}=–2V, I_C=–3A	70			
Gain-Bandwidth Product	f_T	V_{CE}=–2V, I_C=–0.3A		400		MHz
Output Capacitance	C_{ob}	V_{CB}=–10V, f=1MHz		26		pF

* : The 2SB1396 is classified by 0.5A h_{FE} as follows :

140	S	280	200	T	400	280	U	560

Marking : BO

h_{FE} rank : S, T, U

SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=–1.5A, I_B=–30mA		–220	–400	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=–1.5A, I_B=–30mA		–0.9	–1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=–10μA, I_E=0	–15			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=–1mA, R_{BE}=∞	–10			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=–10μA, I_C=0	–7			V