Ordering number: EN 2555A

SANYO

No.2555A

2SB1302

PNP Epitaxial Planar Silicon Transistor

High-Current Switching Applications

Applications

. DC-DC converters, motor drivers, relay drivers, lamp drivers

Features

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

Absolute Maximum Ratings at Ta=25°C

				unit
Collector to Base Voltage	V_{CBO}		-25	V
Collector to Emitter Voltage	V_{CEO}		-20	V
Emitter to Base Voltage	V_{EBO}		-5	V
Collector Current	I_C		-5	A
Collector Current(Pulse)	I_{CP}		-8	A
Collector Dissipation	P_C	Mounted on ceramic board ($250mm^2$ x 0.8mm)	1.3	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=-20V,I_E=0			-500	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=-4V,I_C=0			-500	nA
DC Current Gain	$h_{FE(1)}$	V_{CE}=-2V,I_C=-500mA	100*		400*	
	$h_{FE(2)}$	V_{CE}=-2V,I_C=-4A	60			
Gain-Bandwidth Product	f_T	V_{CE}=-5V,I_C=-200mA		320		MHz
Output Capacitance	C_{ob}	V_{CB}=-10V,f=1MHz		60		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=-3A,I_B=-60mA		-250	-500	mV
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=-3A,I_B=-60mA		-1.0	-1.3	V

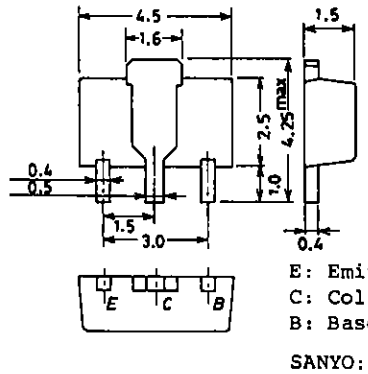
Continued on next page.

*: The 2SB1302 is classified by 500mA h_{FE} as follows:

100 R 200	140 S 280	200 T 400

Marking : BJ
h_{FE} rank : R,S,T

Package Dimensions 2038
(unit:mm)

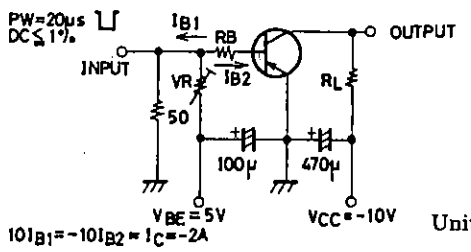


E: Emitter
C: Collector
B: Base
SANYO: PCP
(Bottom View)

Continued from preceding page.

			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=-10μA, I_E=0	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=-1mA, R_{BE}=∞	-20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=-10μA, I_C=0	-5			V
Turn-on Time	t_{on}	See specified Test Circuit.		40		ns
Storage Time	t_{stg}	"		200		ns
Fall Time	t_f	"		10		ns

Switching Time Test Circuit



Unit (Resistance : Ω, Capacitance : F)