

2SB1156

Silicon PNP epitaxial planar type

For power switching

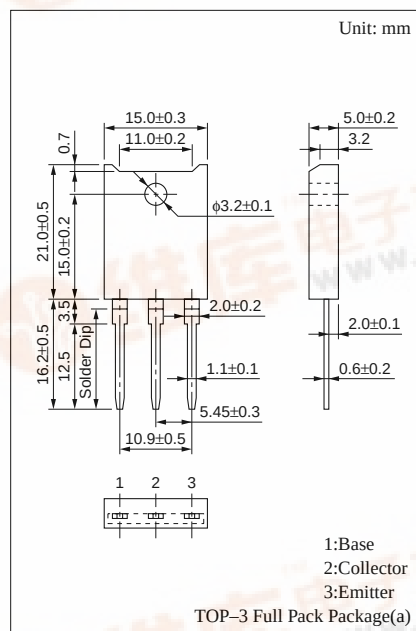
Complementary to 2SD1707

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Satisfactory linearity of forward current transfer ratio h_{FE}
- Large collector current I_C
- Full-pack package which can be installed to the heat sink with one screw

■ Absolute Maximum Ratings (T_C=25°C)

Parameter		Symbol	Ratings	Unit
Collector to base voltage		V_{CBO}	-130	V
Collector to emitter voltage		V_{CEO}	-80	V
Emitter to base voltage		V_{EBO}	-7	V
Peak collector current		I_{CP}	-30	A
Collector current		I_C	-20	A
Collector power dissipation	$T_C=25^\circ\text{C}$	P_C	100	W
	$T_a=25^\circ\text{C}$		3	
Junction temperature		T_j	150	$^\circ\text{C}$
Storage temperature		T_{stg}	-55 to +150	$^\circ\text{C}$



■ Electrical Characteristics (T_c=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -100V, I_E = 0$			-10	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-50	μA
Collector to emitter voltage	V_{CEO}	$I_C = -10mA, I_B = 0$	-80			V
Forward current transfer ratio	h_{FE1}	$V_{CE} = -2V, I_C = -0.1A$	45			
	h_{FE2}^*	$V_{CE} = -2V, I_C = -3A$	90		260	
	h_{FE3}	$V_{CE} = -2V, I_C = -10A$	30			
Collector to emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -8A, I_B = -0.4A$			-0.5	V
	$V_{CE(sat)2}$	$I_C = -20A, I_B = -2A$			-1.5	V
Base to emitter saturation voltage	$V_{BE(sat)1}$	$I_C = -8A, I_B = -0.4A$			-1.5	V
	$V_{BE(sat)2}$	$I_C = -20A, I_B = -2A$			-2.5	V
Transition frequency	f_T	$V_{CE} = -10V, I_C = -0.5A, f = 10MHz$		25		MHz
Turn-on time	t_{on}	$I_C = -3A, I_{B1} = -0.8A, I_{B2} = 0.8A,$ $V_{CC} = -50V$		0.5		μs
Storage time	t_{stg}			1.2		μs
Fall time	t_f			0.2		μs

n_{FF2} Rank classification

Rank	Q	P
hpE2	90 to 180	130 to 260

Note: Ordering can be made by the common rank (PO rank $h_{FF2} = 90$ to 260) in the rank classification.



