

# 2SB1606

## Silicon PNP epitaxial planar type

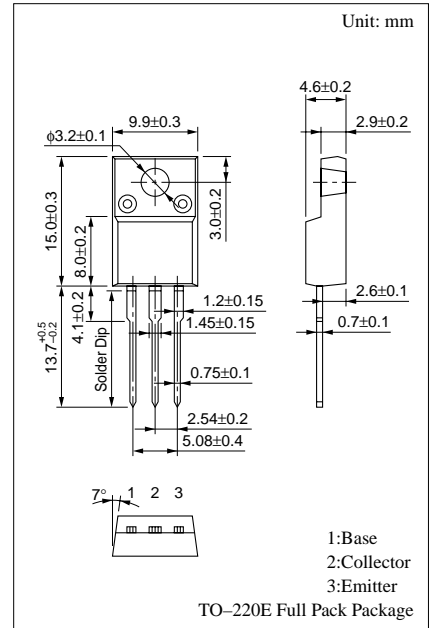
For power switching

### 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 with outstanding insulation, which can be installed to the heat sink with one screw

### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rated	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	$I_{CP}$	-10	A
Collector current	$I_C$	-5	A
Collector power dissipation	$P_C$	T <sub>C</sub> =25°C	40
		T <sub>a</sub> =25°C	2
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C



### Electrical Characteristics (Ta=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			
	$h_{FE2}^*$	$V_{CE} = -2V, I_C = -2A$	90		260	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -4A, I_B = -0.2A$			-0.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -4A, I_B = -0.2A$			-1.5	V
Transition frequency	$f_T$	$V_{CE} = -10V, I_C = -0.5A, f = 10MHz$		30		MHz
Turn-on time	$t_{on}$	$I_C = -2A, I_{B1} = -0.2A, I_{B2} = 0.2A$		0.13		μs
Storage time	$t_{stg}$			0.5		μs
Fall time	$t_f$			0.13		μs

\* $h_{FE2}$  Rank classification

Rank	Q	P
$h_{FE2}$	90 to 180	130 to 260

