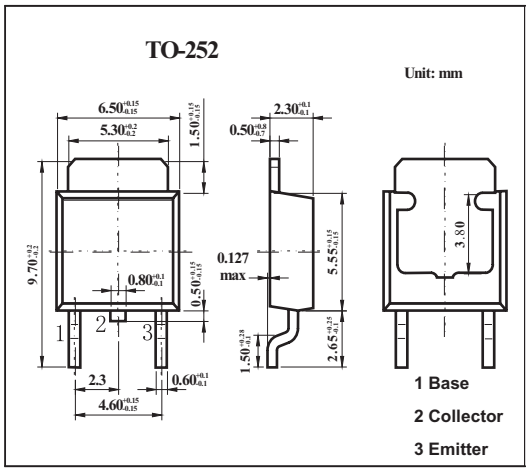
Silicon NPN Epitaxial Planar Type

2SD1256



■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$.
- Satisfactory linearity of forward current transfer ratio h_{FE}.
- Large collector current I_C.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	130	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	5	A
Peak collector current	I_{CP}	10	A
Collector power dissipation Ta = 25℃	P_C	1.3	W
Collector power dissipation		40	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter voltage	V_{CEO}	I_C = 10mA, I_B = 0	80			V
Collector-base cutoff curent	I_{CBO}	V_{CB} = 100 V,I_E = 0			10	μA
Emitter-base cutoff current	I_{EBO}	V_{EB} = 5 V, I_C = 0			50	μA
Forward current transfer ratio	h_{FE}	V_{CE} = 2 V, I_C = 2 A	90		260	
		V_{CE} = 2 V, I_C = 0.1 A	45			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 2 A, I_B = 0.2 A			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 2 A, I_B = 0.2 A			1.5	V
Transition frequency	f_T	V_{CE} = 10 V, I_C = 0.5 A , f = 10 MHz		30		MHz
Turn-on time	t_{on}	I_C = 2 A,I_{B1} = -I_{B2} = 0.2 A, V_{CC} = 50 V		0.5		μs
Storage time	t_{stg}			1.5		μs
Fall time	t_f			0.15		μs

■ h_{FE} Classification

Rank	Q	P
h_{FE}	90～180	130～260