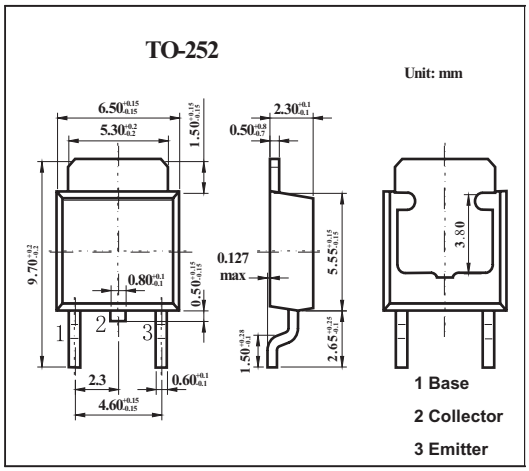
Silicon NPN epitaxial planar type

2SD1254



■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$.
- Satisfactory linearity of forward current transfer ratio hFE.
- 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	3	A
Peak collector current	I_{CP}	6	A
Collector power dissipation	P_C	30	W
Ta = 25℃		1.3	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 = 10 mA, I_B = 0	80			V
Collector-base cutoff current	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 = 0.5 A	60		260	
Forward current transfer ratio		V_{CE} = 2 V, I_C = 0.1 A	45			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 2 A, I_B = 0.1 A			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 2 A, I_B = 0.1 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	ton	I_C=0.5A		0.5		μs
Storage time	tstg	I_{B1}=-I_{B2}=50 mA		2.5		μs
Fall time	tf	V_{CC}=50V		0.15		μs

■ hFE Classification

Rank	R	Q	P
h_{FE}	60～120	90～180	130～260