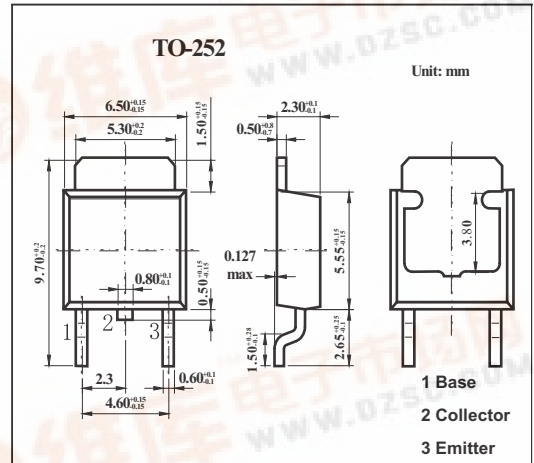


SMD Type Transistors

Silicon NPN Epitaxial Planar Type
2SD1257,2SD1257A

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 $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector-base voltage	2SD1257	130	V
	2SD1257A	150	V
Collector-emitter voltage	2SD1257	80	V
	2SD1257A	100	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_c	7	A
Peak collector current	I_{CP}	15	A
Collector power dissipation $T_a = 25^\circ C$	P_c	1.3	W
		40	W
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

2SD1257,2SD1257A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-emitter voltage	V _{CEO}	I _C = 10 mA, I _B = 0	80			V
			100			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 = 3 A	90		260	
Forward current transfer ratio		V _{CE} = 2 V, I _C = 0.1A	45			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 5 A, I _B = 0.25 A			0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 5 A, I _B = 0.25 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 =3A		0.5		μs
Storage time	t _{stg}	I _{B1} =-I _{B2} =0.3 A		1.5		μs
Fall time	t _f	V _{CC} =50V		0.1		μs

■ hFE Classification

Rank	Q	P
hFE	90~180	130~260