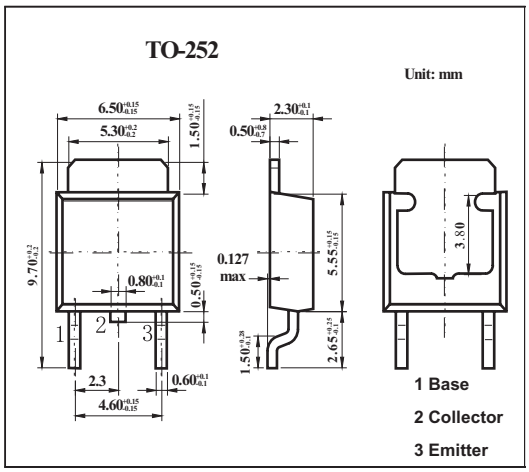
Silicon NPN Triple Diffusion Planar Type

2SD1249, 2SD1249A



■ Features

- High collector-base voltage (Emitter open) V_{CBO}

■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Collector-base voltage (Emitter open)	2SD1249	V_{CBO}	350	V
	2SD1249A		400	V
Collector-emitter voltage (Base open)	2SD1249	V_{CEO}	250	V
	2SD1249A		300	V
Emitter-base voltage (Collector open)		V_{EBO}	5	V
Collector current		I_C	0.75	A
Peak collector current		I_{CP}	1.5	A
Collector power dissipation		P_C	35	W
Ta = 25℃			1.3	
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	-55 to +150	℃

2SD1249, 2SD1249A

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter voltage 2SD1249	V_{CEO}	I_C = 30 mA, I_B = 0	250			V
(Base open) 2SD1249A			300			V
Collector-emitter cutoff 2SD1249	I_{CES}	V_{CE} = 350 V,V_{BE} = 0			1	mA
current (E-B short) 2SD1249A		V_{CE} = 400 V,V_{BE} = 0			1	mA
Collector-emitter cutoff 2SD1249	I_{CEO}	V_{CE} = 150 V,I_B = 0			1	mA
current (Base open) 2SD1249A		V_{CE} = 200 V,I_B = 0			1	mA
Emitter-base cutoff current (Collector open)	I_{EBO}	V_{EB} = 5 V,I_C = 0			1	mA
Forward current transfer ratio	h_{FE}	V_{CE} = 10 V, I_C = 0.3 A	40		250	
		V_{CE} = 10 V, I_C = 1 A	10			
Base-emitter voltage	V_{BE}	V_{CE} = 10 V,I_C = 1 A			1.5	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 1 A, I_B = 0.2 A			1.0	V
Transition frequency	f_T	V_{CE} = 10 V, I_C = 0.2 A, f = 10 MHz		30		MHz
Turn-on time	t_{on}	I_C = 1 A		0.5		μs
Strage time	t_{stg}	I_{B1} = 0.1 A, I_{B2} = ? 0.1 A		2.0		μs
Fall time	t_f	V_{CC} = 50 V		0.5		μs

■ h_{FE} Classification

Rank	R	Q	P
hFE	40 to 90	70 to 150	120 to 250