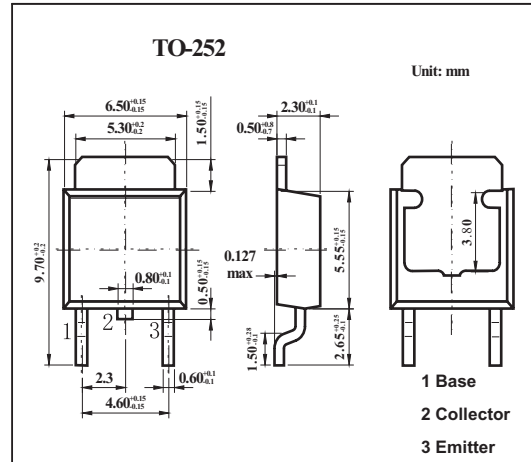


2SD1253, 2SD1253A

■ Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity.
- Low collector to emitter saturation voltage $V_{CE(sat)}$.



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit	
Collector-base voltage	V _{CB0}	2SD1253	60	V
		2SD1253A	80	V
Collector-emitter voltage	V _{CE0}	2SD1253	60	V
		2SD1253A	80	V
Emitter-base voltage	V _{EB0}	5	V	
Collector current	I _C	4	A	
Peak collector current	I _{CP}	8	A	
Collector power dissipation	P _C	T _a = 25°C	1.3	W
		T _c = 25°C	40	
Junction temperature	T _J	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	

2SD1253, 2SD1253A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter voltage	V _{CEO}	I _C = 30 mA, I _B = 0	60			V
			80			V
Base-emitter voltage	V _{BE}	V _{CE} = 4 V, I _C = 3 A			2	V
Collector-emitter cutoff current	I _{CES}	V _{CE} = 60 V, V _{BE} = 0			400	μA
		V _{CE} = 80 V, V _{BE} = 0			400	μA
Collector-emitter cutoff current	I _{CEO}	V _{CE} = 30 V, I _B = 0			700	μA
		V _{CE} = 60 V, I _B = 0			700	μA
Emitter-base cutoff current	I _{EBO}	V _{EB} = 5 V, I _C = 0			1	mA
Forward current transfer ratio	h _{FE}	V _{CE} = 4 V, I _C = 1 A	40		250	
Forward current transfer ratio		V _{CE} = 4 V, I _C = 3 A	15			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 4 A, I _B = 0.4 A			1.5	V
Transition frequency	f _T	V _{CE} = 5 V, I _C = 0.5 A, f = 1 MHz		20		MHz
Turn-on time	t _{on}	I _C =4A		0.4		μs
Storage time	t _{stg}	I _{B1} =-I _{B2} =0.4 A		1.2		μs
Fall time	t _f	V _{CC} =50V		0.5		μs

■ hFE Classification

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