

2SD1005

NPN Medium Power Transistors

Features

- High current (max. 1 A).
- Low voltage (max. 80 V).



■ Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Collector-basevoltage/		СВО	100	V
Collector-emittervoltage/		CEO	80	V
Emitter-base voltage		Vebo	5	V
Collector current		lc	1	А
Peak collector current		Ісм	1.5	А
Peak base current		Івм	0.2	А
Total power dissipation		Ptot	1.3	W
Storage temperature		Tstg	-65 to +150	Ĉ
Junction temperature		Tj	150	Ĉ
Operating ambient temperature		Ramb	-65 to +150	Ĉ
Thermal resistance from junction to ambient		Rth(j-a)	94	K/W
Thermal resistance from junction to solder point		Rth(j-s)	14	K/W



2SD1005

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons		Тур	Max	Unit
Collector cutoff current	Ісво	Vcb = 30 V, IE = 0			100	nA
		Vсв = 30 V, I∈ = 0; Тј = 125℃			10	μA
Emitter cutoff current	Іево	VEB = 5 V, IC = 0			100	nA
DC current gain	hfe	Ic = 5 mA; Vce =2V	90			
		Ic = 150 mA; Vce=2V	90		400	
		Ic = 500 mA; Vce =2V	25		80	
Collector-emitter saturation voltage	VCE(sat)	Ic = 500 mA; Iв = 50 mA			0.5	V
Base to emitter voltage	VBE	Ic = 500 mA; Vce = 2 V			1	V
Transition frequency	fτ	Ic = 10 mA; Vce = 5 V; f = 100 MHz		130		MHz
DC current gain ratio of the complementary pairs	hFE hFE	Ic = 150 mA; Vce = 2V		1.3	1.6	

hFE Classification

Marking	BW	BV	BU
hFE1	90-180	135-270	200-400

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