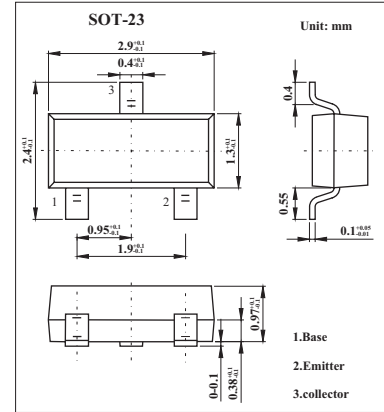


NPN Silicon Epitaxia

2SD780

■ Features

- Micro package.
- High DC current gain. h_{FE} : 200TYP. ($V_{CE}=1.0V, I_C=50mA$).

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	5.0	V
Collector current	I_C	300	mA
Total power dissipation at $25^\circ C$ ambient temperature	P_T	200	mW
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 50 V, I_E = 0$			100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5.0 V, I_C = 0$			100	nA
DC current gain *	h_{FE}	$V_{CE} = 1.0 V, I_C = 50 mA$	110	200	400	
Base to emitter voltage *	V_{BE}	$V_{CE} = 6.0 V, I_C = 10 mA$	600	645	700	mV
Collector saturation voltage *	$V_{CE(sat)}$	$I_C = 300 mA, I_B = 30 mA$		0.15	0.6	V
Output capacitance	C_{ob}	$V_{CB} = 6.0 V, I_E = 0, f = 1.0 MHz$		7.0		pF
Gain bandwidth product	f_T	$V_{CE} = 6.0 V, I_E = -10 mA$		140		MHz

* Pulsed: $PW \leq 350 \mu s$, duty cycle $\leq 2\%$

■ h_{FE} Classification

Marking	DW1	DW2	DW3	DW4	DW5
h_{FE}	110~180	135~220	170~270	200~320	250~400