

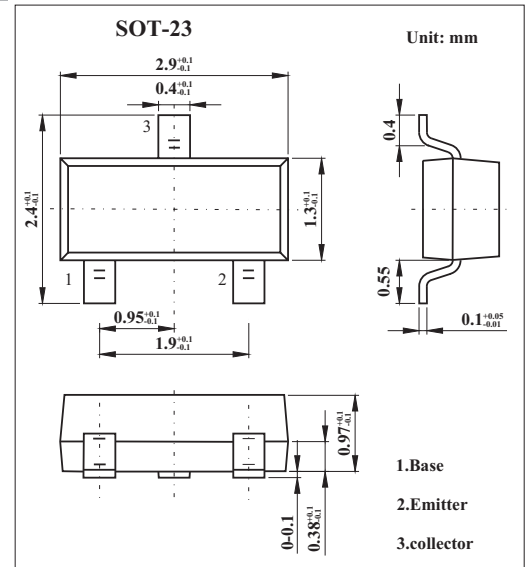
SOT-23 Plastic-Encapsulate Transistors

Features

- Low $V_{CE(sat)}$, $V_{CE(sat)} = 0.2V$ (Typ.) $I_C / I_B = 0.5A / 50mA$
- High V_{CEO} , $V_{CEO} = 80V$.
- Power Transistor

MECHANICAL DATA

- Case style: SOT-23 molded plastic
- Mounting position: any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	80	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	0.5	A
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

PACKAGE INFORMATION

Device	Package	Shipping
2SD1782	SOT-23	3000/Tape&Reel

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = 50\mu A$	80			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 2mA$	80			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 50\mu A$	5			V
Collector cutoff current	I_{CBO}	$V_{CB} = 50V$			0.5	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4V$			0.5	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C / I_B = 500mA / 50mA$		0.2	0.5	V
DC current transfer ratio	h_{FE}	$V_{CE} = 3V, I_C = 100mA$	120		390	
Output capacitance	f_T	$V_{CE} = 10V, I_E = -50mA, f = 100MHz$		120		MHz
Transition frequency	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		7.5		pF

hFE Classification

Marking	AJ	
Rank	Q	R
h_{FE}	120~270	180~390