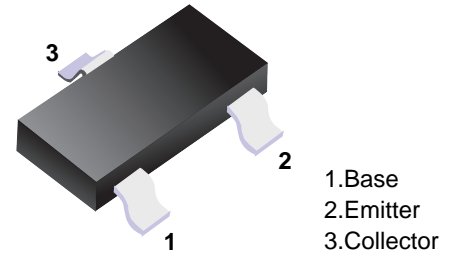


■ **Medium Power Transistor**



■ **Simplified outline(SOT-23)**

■ **Features**

- Very Low $V_{CE(sat)}$. $V_{CE(sat)} = -0.1V(Typ.)$ ($I_c / I_B = 500mA / 50mA$)
- High current capacity in compact package.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	40	V
Collector-emitter voltage	V_{CE0}	32	V
Emitter-base voltage	V_{EB0}	5	V
Collector current	I_c	0.8	A
Collector current *	I_{cP}	1.5	
Collector power dissipation	P_c	200	mW
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

* Single pulse $P_w=100ms$.

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

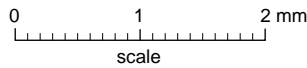
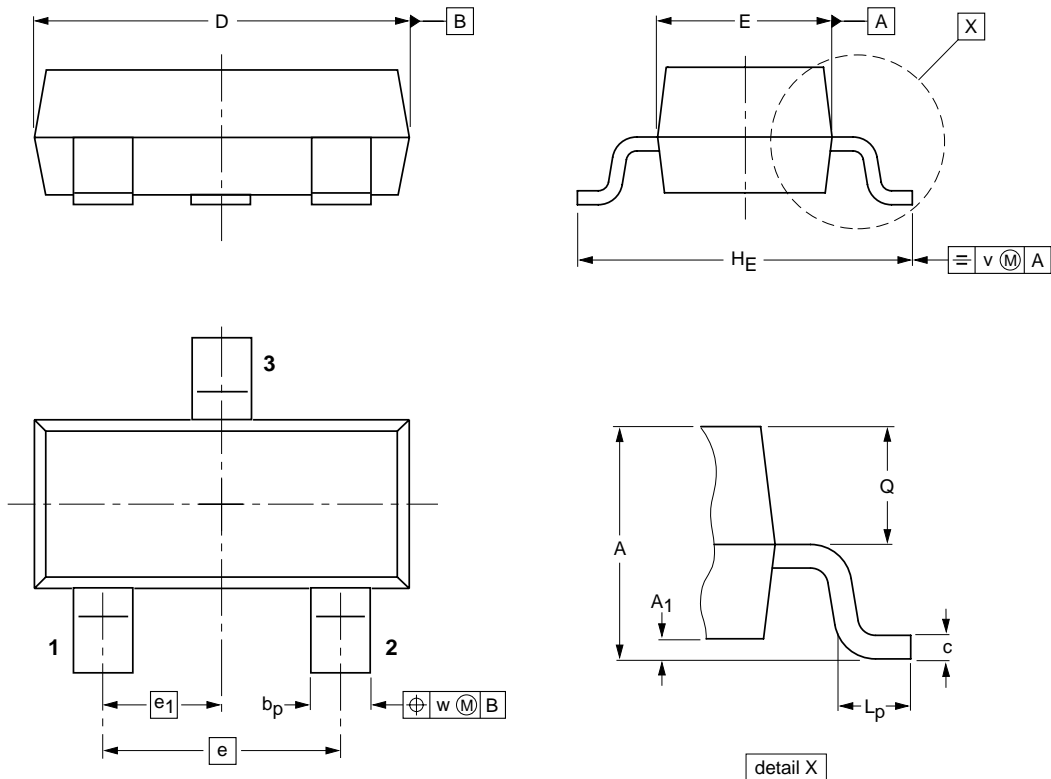
Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CB0}	$I_c=50\mu A$	40			V
Collector-emitter breakdown voltage	BV_{CE0}	$I_c=1mA$	32			V
Emitter-base breakdown voltage	BV_{EB0}	$I_E=50\mu A$	5			V
Collector cutoff current	I_{cB0}	$V_{CB}=20V$			0.5	μA
Emitter cutoff current	I_{EB0}	$V_{EB}=4V$			0.5	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c/I_B=500mA/50mA$		0.1	0.4	V
DC current transfer ratio	h_{FE}	$V_{CE}=3V, I_c=100mA$	120		390	
Output capacitance	f_T	$V_{CE}=5V, I_E = -50mA, f=100MHz$		150		MHz
Transition frequency	C_{ob}	$V_{CB}=10V, I_E=0A, f=1MHz$		15		pF

■ **h_{FE} Classification**

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

Package Outline

SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1