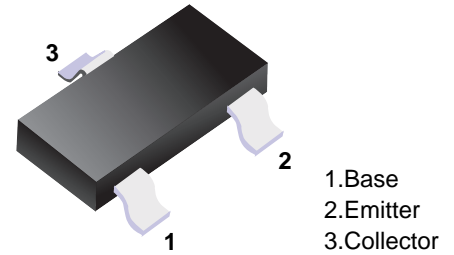


■ **Medium Power Transistor**



■ **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  $T_a = 25^\circ C$**

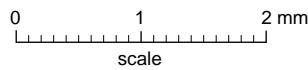
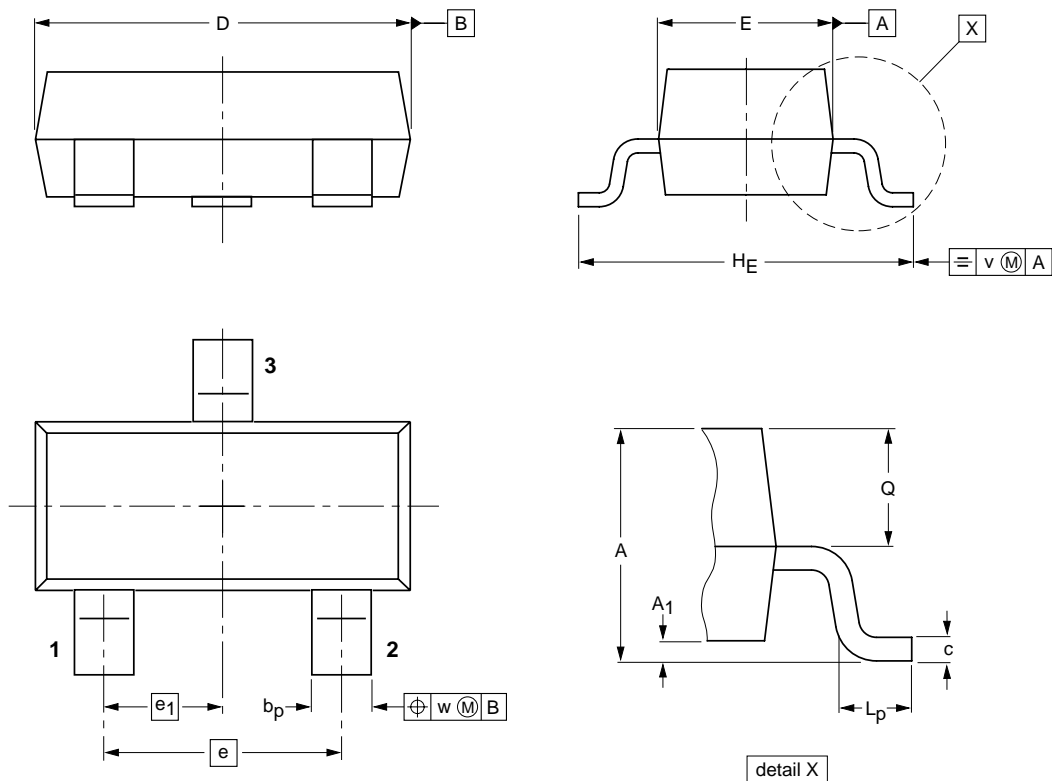
Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$BV_{CB0}$	$I_c=50\mu A$	40			V
Collector-emitter breakdown voltage	$BV_{CE0}$	$I_c=1mA$	32			V
Emitter-base breakdown voltage	$BV_{EB0}$	$I_E=50\mu A$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=20V$			0.5	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB}=4V$			0.5	$\mu A$
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 <sub>1</sub> max.	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	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