FEATURES

- High current gain bandwidth product.
- power dissipation.(P_C=200mW)

APPLICATIONS

- NPN epitaxial silicon transistor.

SOT-23



1. BASE
2. EMITTER
3. COLLECTOR

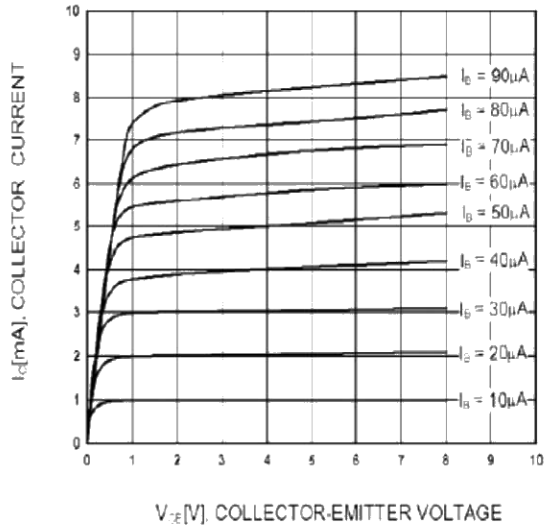
MAXIMUM RATING @ Ta=25℃ unless otherwise specified

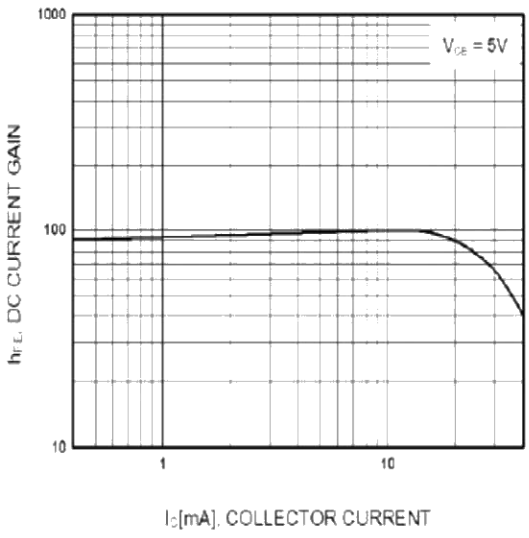
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	200	mA
P_C	Collector Dissipation	200	mW
T_j, T_{stg}	Junction and Storage Temperature	-55~150	℃

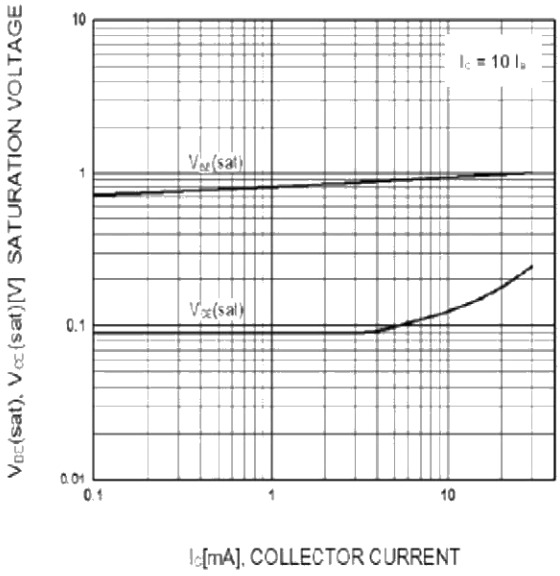
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

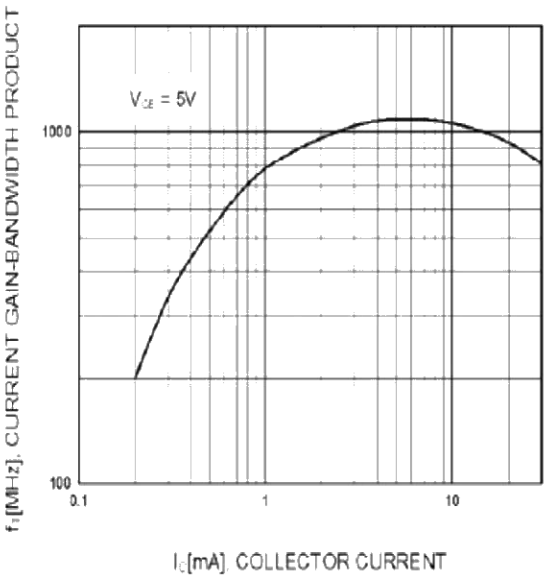
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=18V,I_E=0			0.5	μA
Collector cut-off current	I_{CEO}	V_{CE}=15V,I_B=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=6V,I_C =1mA	70		260	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10 mA, I_B= 1mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10 mA, I_B= 1mA			1.4	V
Transition frequency	f_T	V_{CE}=5V, I_C= 5mA f=400MHz	600			MHz

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

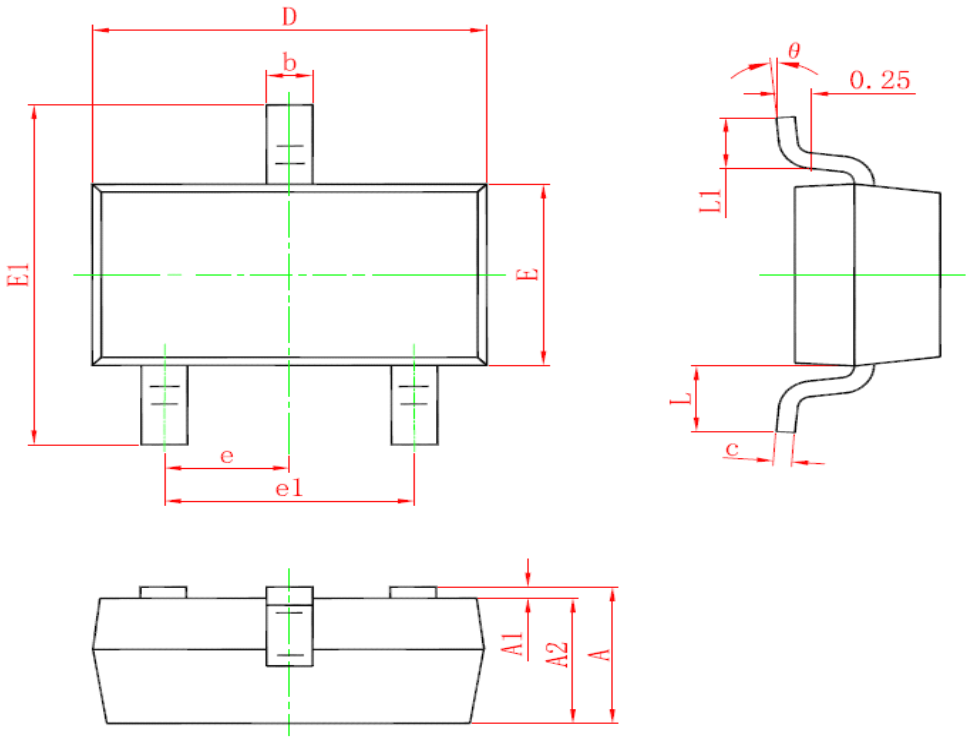








Package Outline Dimensions (Units: mm)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.079
θ	0°	8°	0°	8°