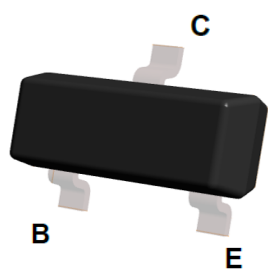
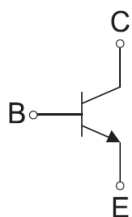
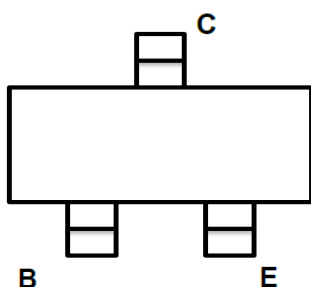


# General Purpose Transistors NPN Silicon



Top View

**SOT-23**



## Product Summary

- $V_{CE0}$  400V
- $I_c$  0.2A
- $P_c$  750mW

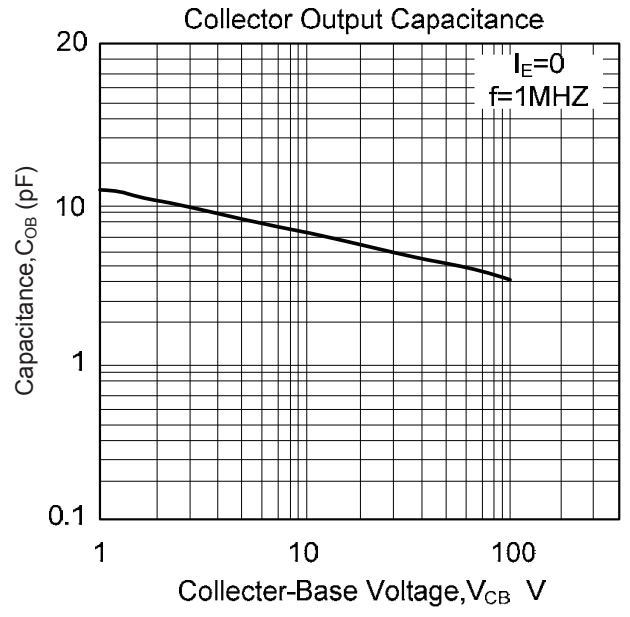
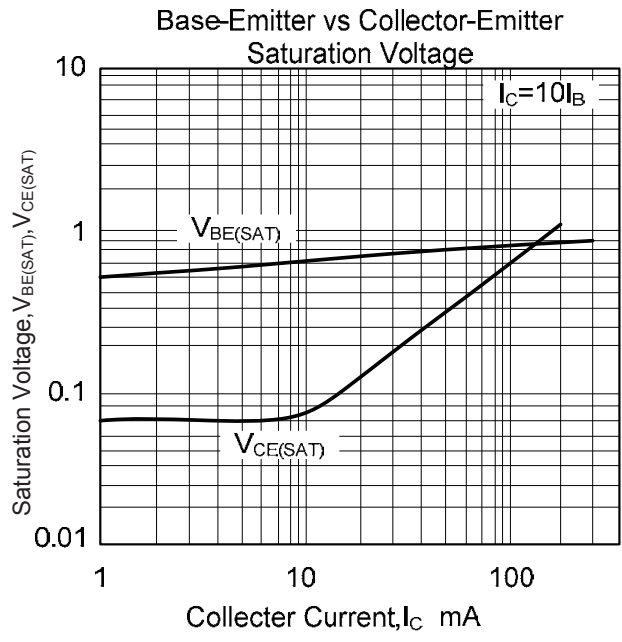
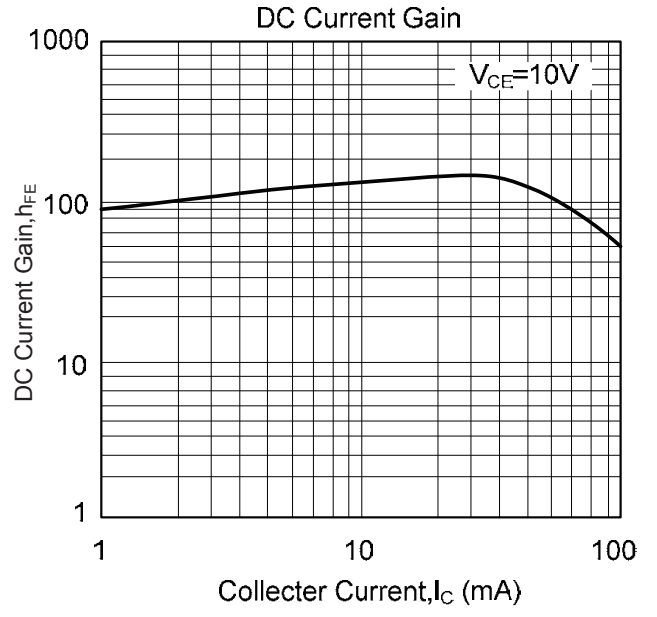
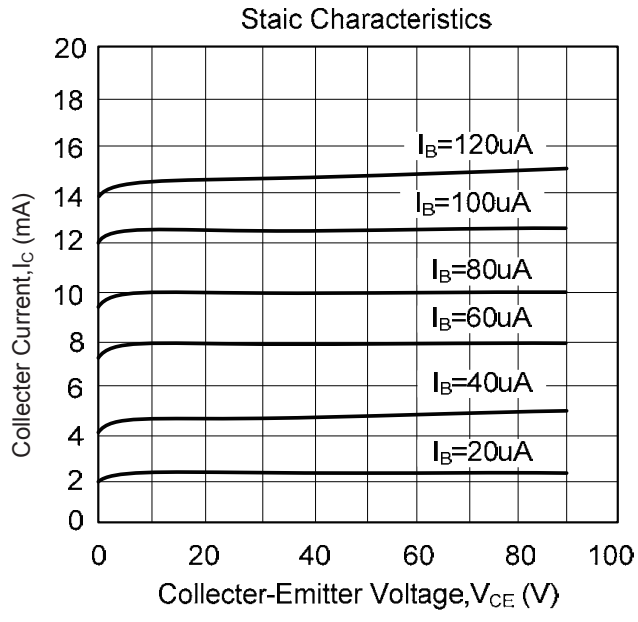
### ■ MAXIMUM RATINGS ( $T_A=25^{\circ}C$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	$V_{CBO}$	600	V
Collector-Emitter Voltage	$V_{CE0}$	400	V
Emitter-Base Voltage	$V_{EBO}$	7	V
Collector Current -Continuous	$I_c$	0.2	A
Power Dissipation	$P_c$	0.75	W
Junction Temperature	$T_J$	150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55~+150	$^{\circ}C$

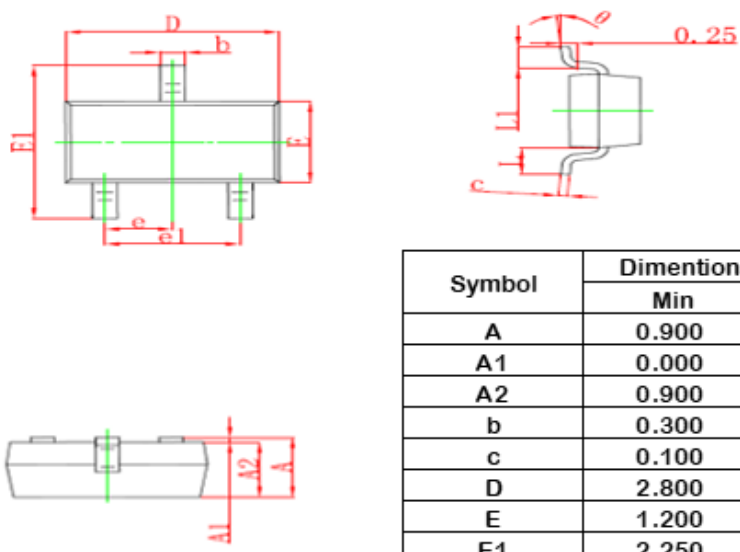
**■ Electrical Characteristics** ( $T_J=25^{\circ}\text{C}$  unless otherwise noted)

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C=0.1\text{mA}$ , $I_E=0$	600			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C=1\text{mA}$ , $I_B=0$	400			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E=0.1\text{mA}$ , $I_C=0$	7			
Base-emitter voltage	$V_{BE}$	$I_E=100\text{mA}$			1.1	
Collector cut-off current	$I_{CBO}$	$V_{CB}=600\text{V}$ , $I_E=0$			100	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=400\text{V}$ , $I_B=0$			100	
Emitter cut-off current	$I_{EBO}$	$V_{EB}=7\text{V}$ , $I_C=0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}$ , $I_B=20\text{mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C=100\text{mA}$ , $I_B=20\text{mA}$			1.2	
DC current gain	$h_{FE(1)}$	$V_{CE}=20\text{V}$ , $I_C=20\text{mA}$	10		70	
	$h_{FE(2)}$	$V_{CE}=10\text{V}$ , $I_C=0.25\text{mA}$	5			
Storage time	$t_s$	$I_C=50\text{mA}$ , $I_{B1}=-I_{B2}=5\text{mA}$ , $V_{CC}=45\text{V}$			1.5	$\mu\text{s}$
Fall time	$t_f$				0.3	
Transition frequency	$f_T$	$V_{CE}=20\text{V}$ , $I_C=20\text{mA}$ , $f=1\text{MHz}$	8			MHz

■ Typical Performance Characteristics

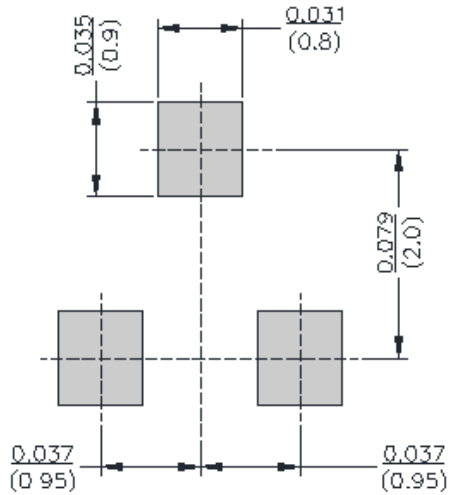


■ SOT-23 Package information



Symbol	Dimensions in Millimeter		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	0.100	0.200	0.004	0.008
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	0.950Type		0.037Type	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.220REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

■ SOT-23 Suggested Pad Layout



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