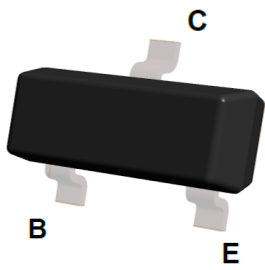
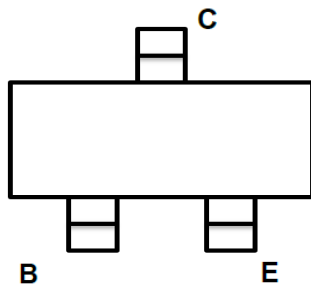


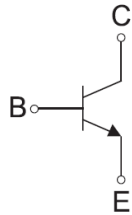
General Purpose Transistors NPN Silicon



Top View



SOT-23



Product Summary

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

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

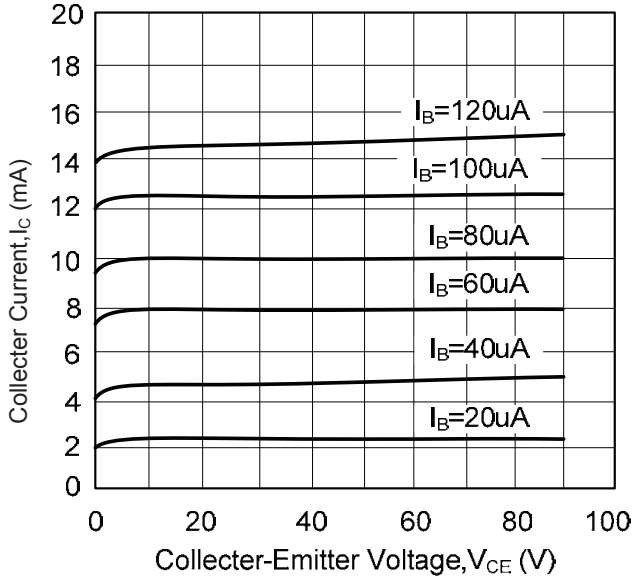
Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current -Continuous	I_c	0.2	A
Power Dissipation	P_c	0.75	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^\circ\text{C}$

■ Electrical Characteristics (T_J=25°C unless otherwise noted)

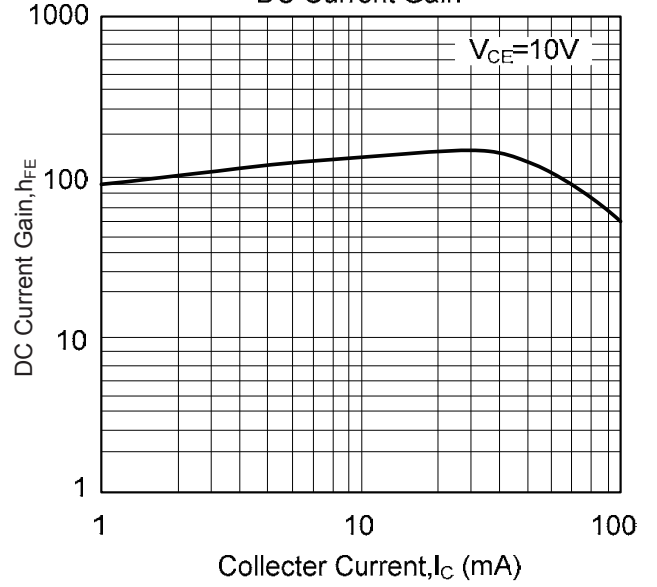
Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c =0.1mA, I _E =0	600			V
Collector- emitter breakdown voltage	V _{CEO}	I _c =1mA, I _B =0	400			
Emitter - base breakdown voltage	V _{EBO}	I _E =0.1mA, I _C =0	7			
Base-emitter voltage	V _{BE}	I _E =100mA			1.1	
Collector cut-off current	I _{CBO}	V _{CB} =600V, I _E =0			100	μA
Collector cut-off current	I _{CEO}	V _{CE} =400V, I _B =0			100	
Emitter cut-off current	I _{EBO}	V _{EB} =7V, I _C =0			100	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =100mA, I _B =20mA			0.5	V
Base - emitter saturation voltage	V _{BE(sat)}	I _C =100mA, I _B =20mA			1.2	
DC current gain	h _{FE(1)}	V _{CE} =20V, I _C =20mA	10		70	
	h _{FE(2)}	V _{CE} =10V, I _C =0.25mA	5			
Storage time	t _s	I _C =50mA, I _{B1} =-I _{B2} =5mA, V _{CC} =45V			1.5	μs
Fall time	t _f				0.3	
Transition frequency	f _T	V _{CE} = 20V, I _C =20mA,f=1MHz	8			MHz

■ Typical Performance Characteristics

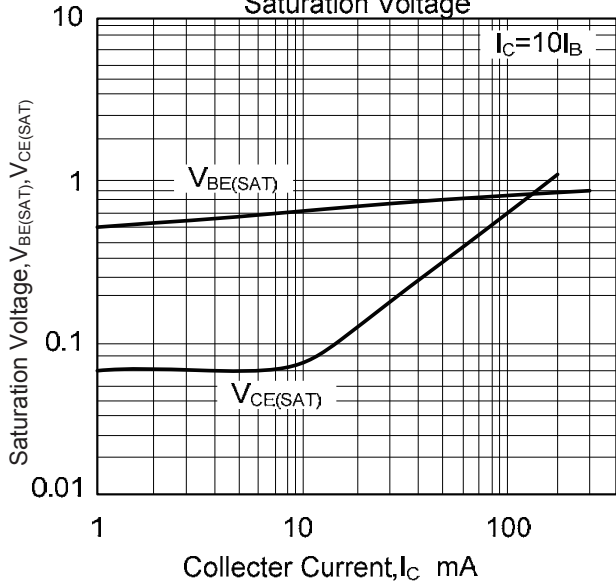
Static Characteristics



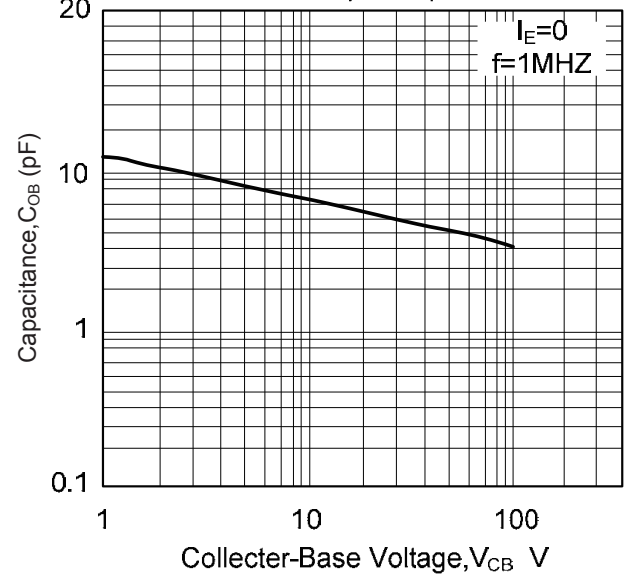
DC Current Gain



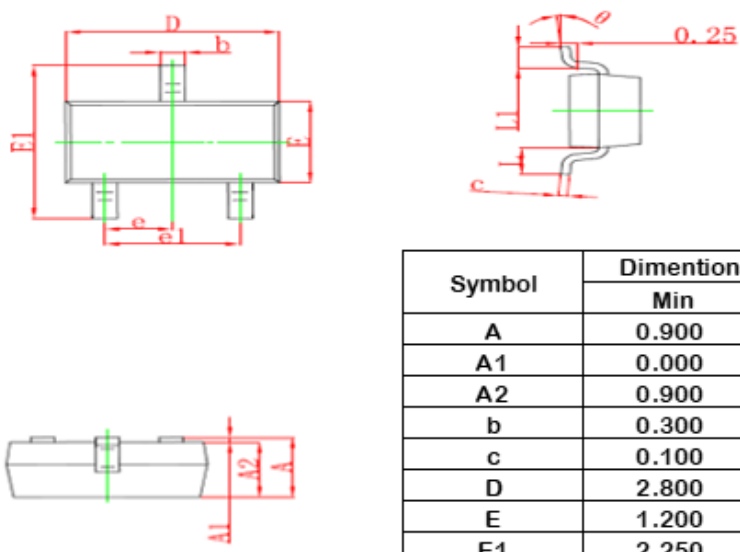
Base-Emitter vs Collector-Emitter Saturation Voltage



Collector Output Capacitance



■ 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

