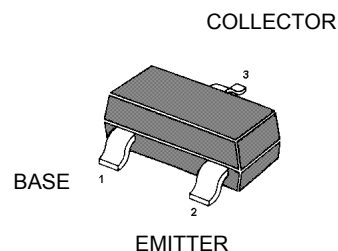


TRANSISTOR (NPN) FEATURE

For general AF applications
High collector current
High current gain
Low collector-emitter saturation voltage
MARKING:6C



SOT-323

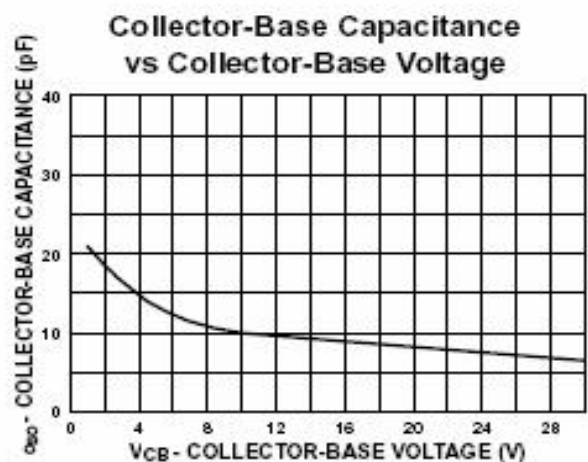
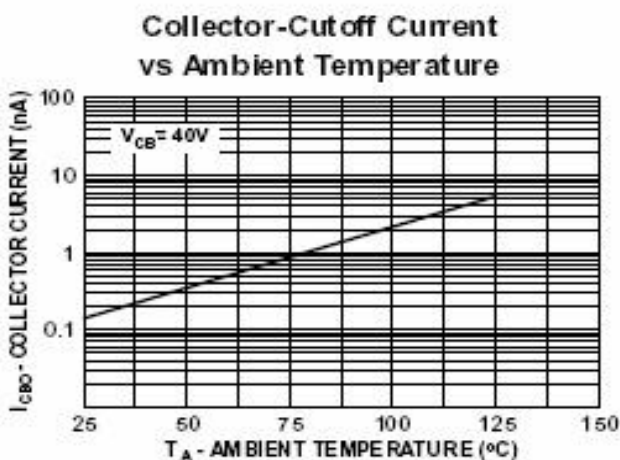
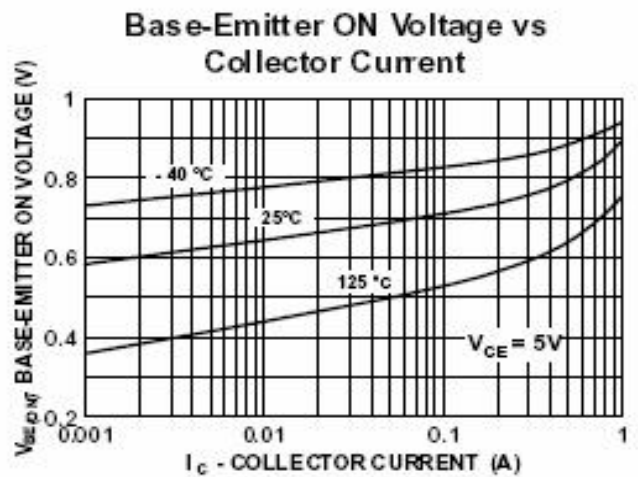
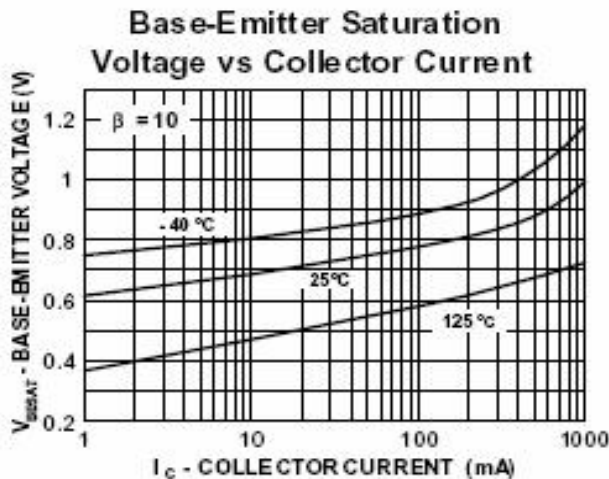
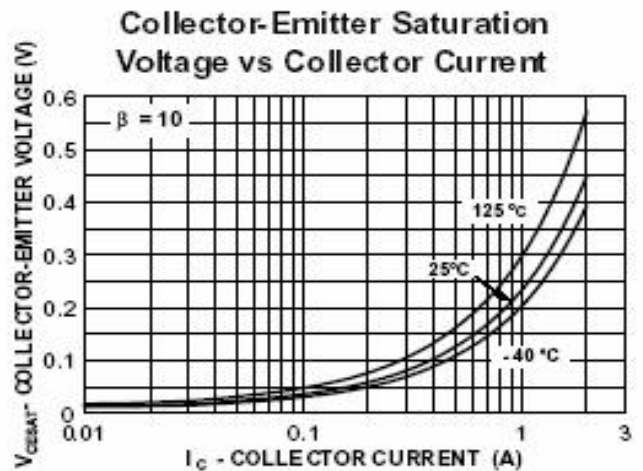
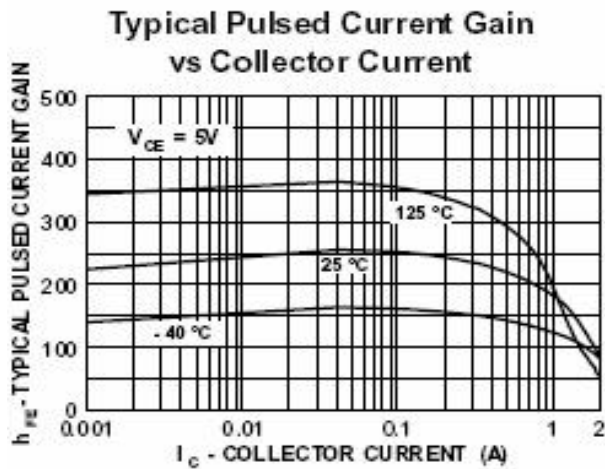
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.5	A
P_C	Collector Power Dissipation	0.3	W
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

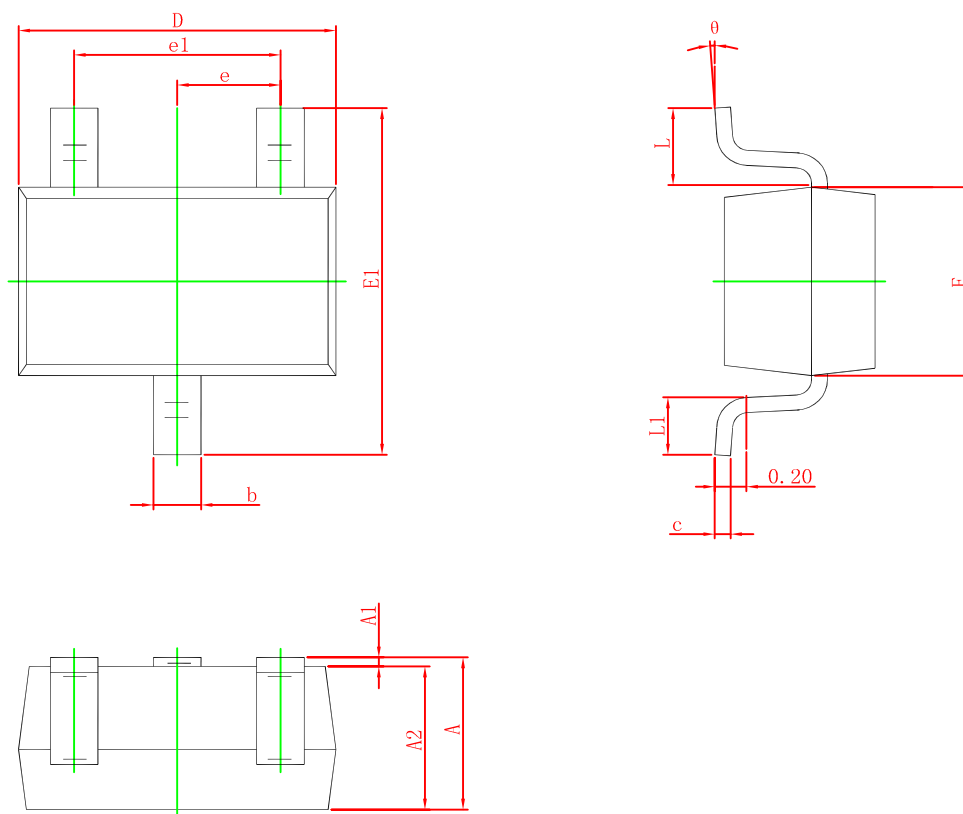
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN		MAX	UNIT
Collector-base breakdown voltage	V_{CBO}	$I_C = 10\mu\text{A}$, $I_E = 0$	50			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C = 10\text{mA}$, $I_B = 0$	45			V
Emitter-base breakdown voltage	V_{EBO}	$I_E = 1\mu\text{A}$, $I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 45\text{V}$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{V}$, $I_C = 0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 1\text{V}$, $I_C = 100\text{mA}$	250		600	
	$h_{FE(2)}$	$V_{CE} = 1\text{V}$, $I_C = 500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$			0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$			1.2	V
Base-emitter voltage	V_{BE}	$V_{CE} = 1\text{V}$, $I_C = 500\text{mA}$			1.2	V
Collector capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$		10		pF
Transition frequency	f_T	$V_{CE} = 5\text{V}$, $I_C = 10\text{mA}$ $f = 100\text{MHz}$	100			MHz

Typical Characteristics



SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°