

TRANSISTOR (NPN)

FEATURE

High DC current gain : $h_{FE}=200(\text{Typ})$

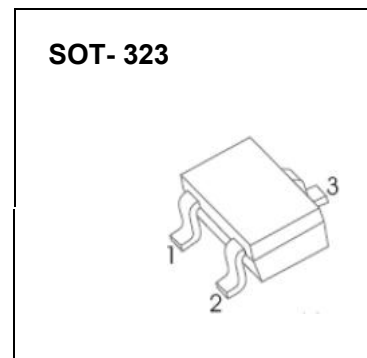
$V_{CE}=6V$, $I_C=1mA$

High voltage: $V_{CEO}=50V$

MARKING: L7

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

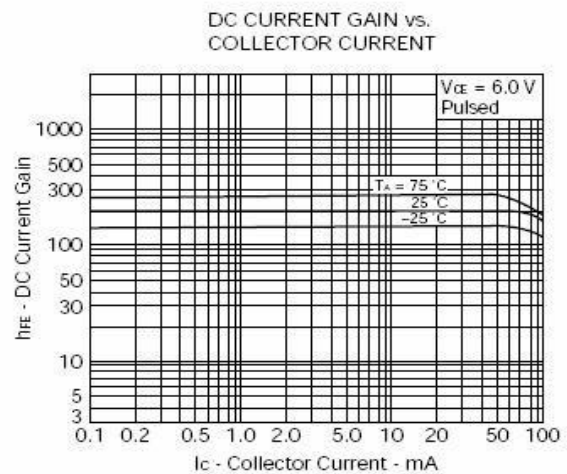
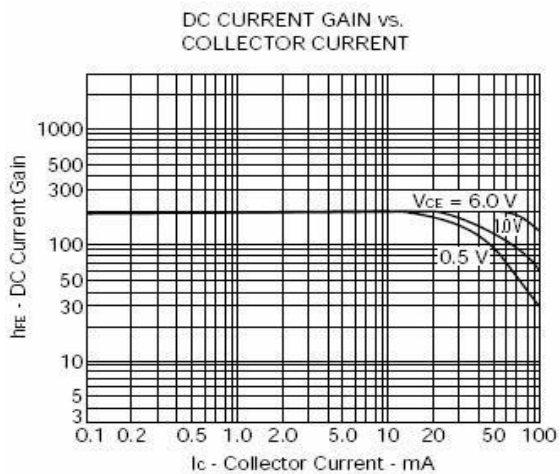
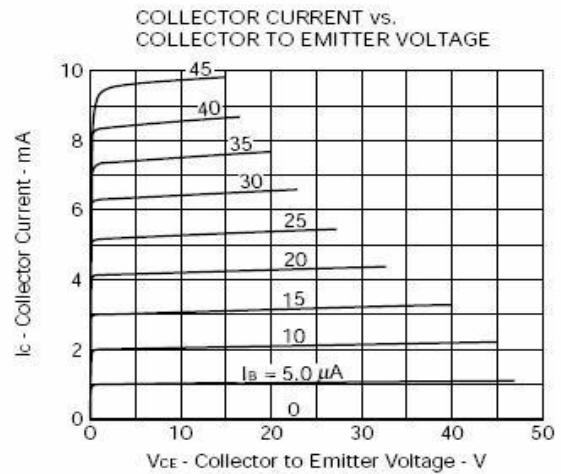
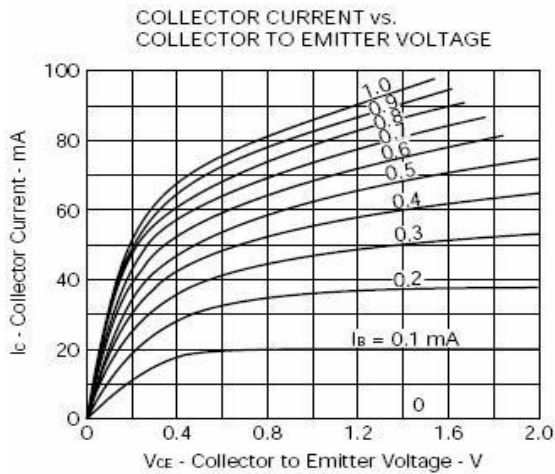
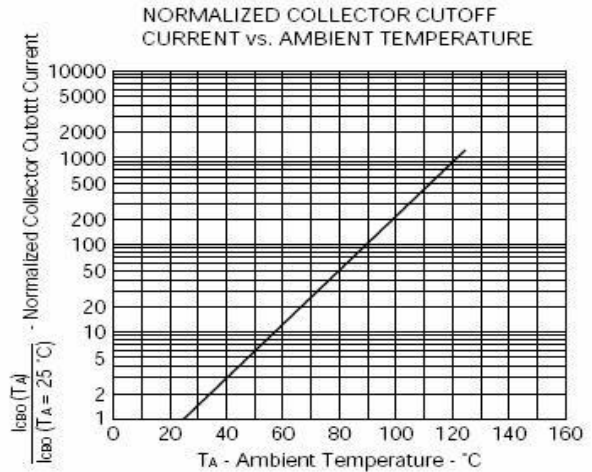
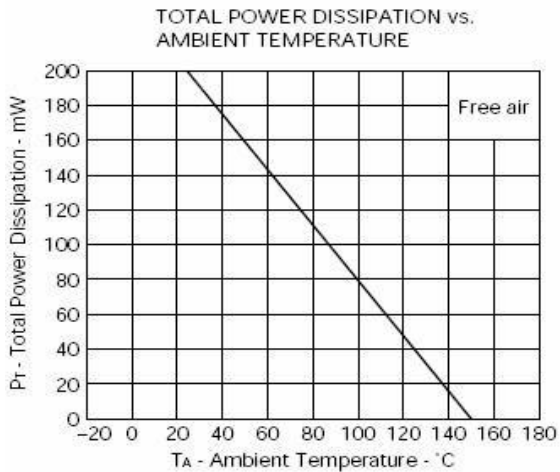
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	100	mA
P_C	Collector Power Dissipation	200	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A$, $I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA$, $I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A$, $I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=60V$, $I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V$, $I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=6V$, $I_C=1mA$	270		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA$, $I_B=10mA$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100mA$, $I_B=10mA$			1	V
Transition frequency	f_T	$V_{CE}=6V$, $I_C=10mA$		250		MHz

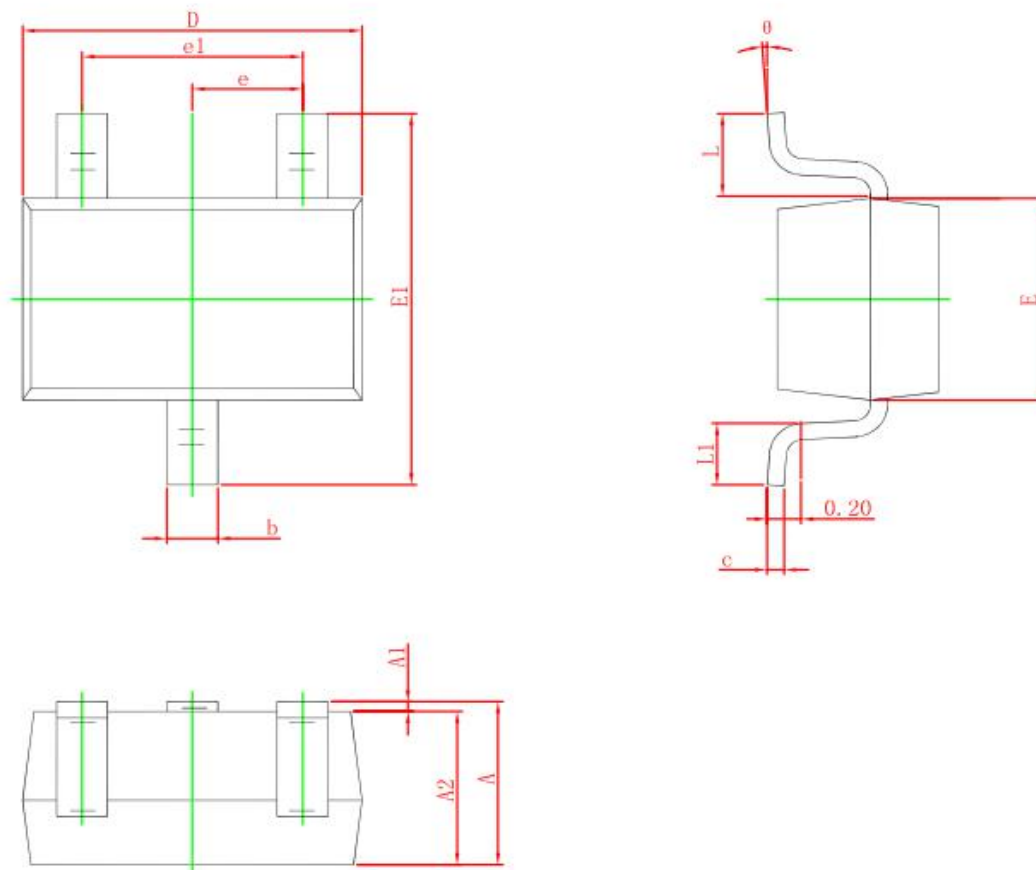
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-323



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°

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