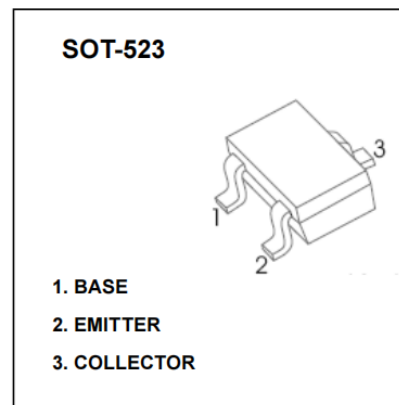


TRANSISTOR (NPN)

FEATURE

High DC current gain : $h_{FE}=200(\text{Typ})$ $V_{CE}=6V$, $I_C=1mA$

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



MAXIMUM RATINGS ($T_A=25^{\circ}C$ 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	$^{\circ}C$
T_{stg}	Storage Temperature	-55-150	$^{\circ}C$

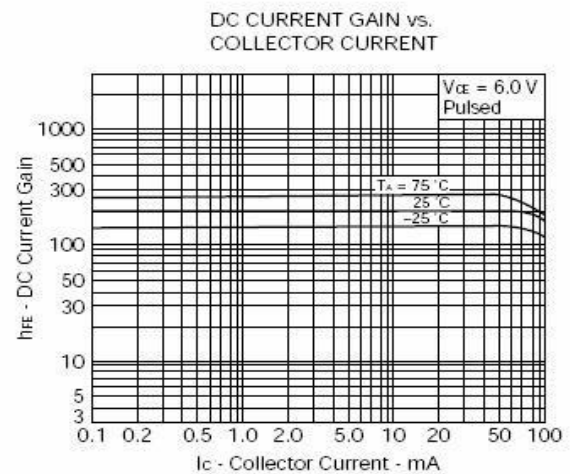
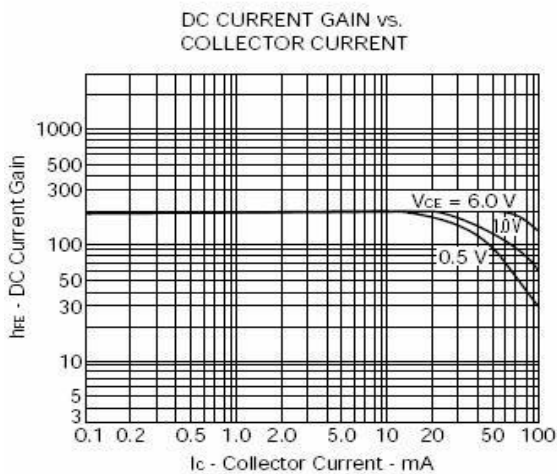
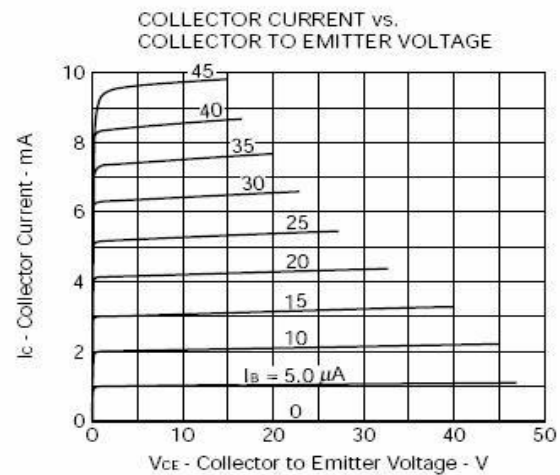
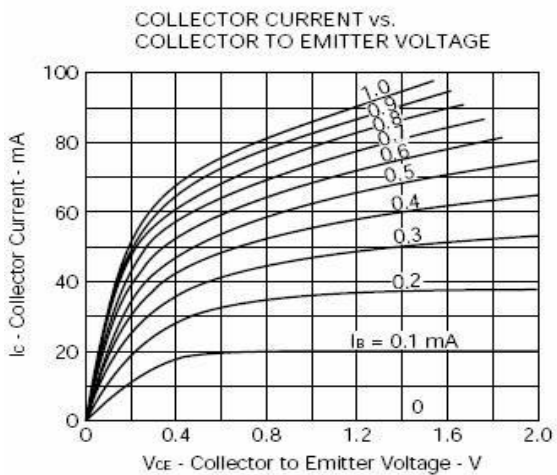
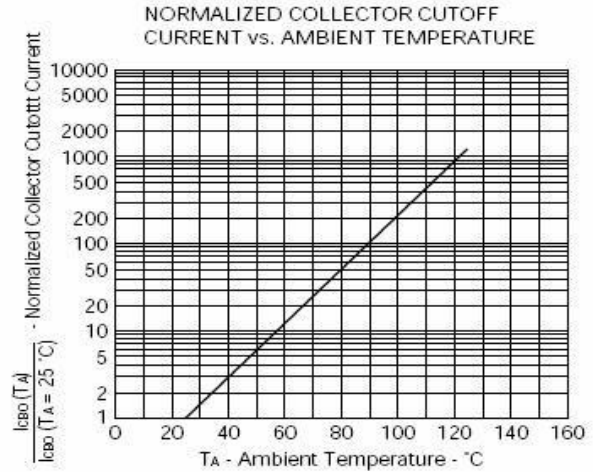
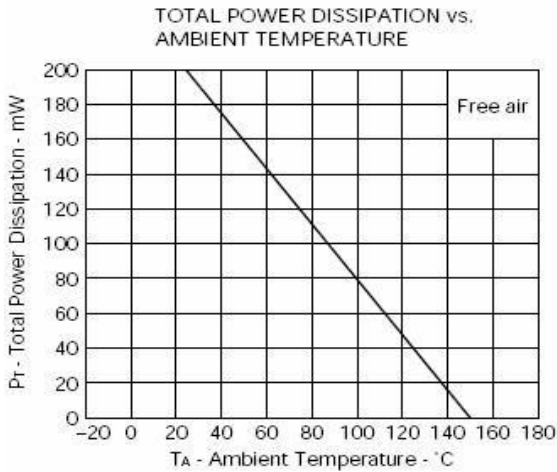
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

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}	$V_{CE}=6V$, $I_C=1mA$	90		700	
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

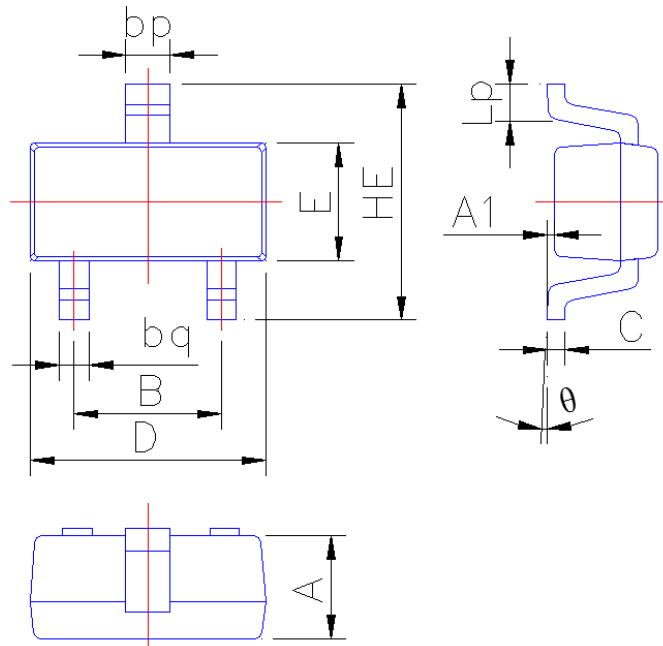
CLASSIFICATION OF h_{FE}

Range	90-180	135-270	200-400	400-700
Marking	L4	L5	L6	L7

Typical Characteristics



SOT-523 Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.60	0.80
A1	0.010	0.100
B	0.95	1.05
bp	0.26	0.40
bq	0.16	0.30
C	0.09	0.15
D	1.50	1.70
E	0.70	0.85
HE	1.45	1.75
Lp	0.16	0.36
θ	0°	5°