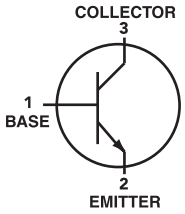
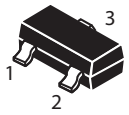
WEITRON

SS8050LT1

NPN General Purpose Transistors

Lead(Pb)-Free





SOT-23

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	25	Vdc
Collector-Base Voltage	V_{CBO}	40	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Collector Current-Continuous	I_C	1500	mAdc

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (1) TA=25°C Derate above 25°C	P_D	225 1.8	mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate, (2) TA=25°C Derate above 25°C	P_D	300 2.4	mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage, Temperature	$T_{J,Tstg}$	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I_C=0.1 mAdc .I_B=0)	$V_{(BR)CEO}$	25	-	Vdc
Collector-Base Breakdown Voltage (I_C=100 μAdc.I_E=0)	$V_{(BR)CBO}$	40	-	Vdc
Emitter-Base Breakdown Voltage (I_E=100 μAdc.I_C=0)	$V_{(BR)EBO}$	5.0	-	Vdc
Collector Cutoff Current (V_{CE}=20 Vdc, I_E= 0)	I_{CEO}	-	0.15	uAdc
Collector Cutoff Current (V_{CB}= 35 Vdc,I_E=0)	I_{CBO}	-	0.15	uAdc
Emitter Cutoff Current (V_{EB}=4.0 Vdc,I_C=0)	I_{EBO}	-	0.15	uAdc

1.FR-5=1.0 x 0.75 x 0.062 in
2.Alumina=0.4 x 0.3 x 0.024 in. 99.5% alumina

ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted) (Countinued)

Characteristics	Symbol	Min	Max	Unit

ON CHARACTERISTICS

DC Current Gain (I_C=100 mAdc, V_{CE}=1.0 Vdc)	h_{FE} (1)	120	600	-
Collector-Emitter Saturation Voltage (I_C=800 mAdc, I_B=80mAdc)	$V_{CE(sat)}$	-	0.5	Vdc

SMALL-SIGNAL CHARACTERISTICS

Current-Gain-Bandwidth Product (I_C=50 mAdc, V_{CE}=10 Vdc, f=30MHz)	f_T	100	-	MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	P	Q	R	S
Range	120-200	150-300	200-400	300-600
Marking	1HA	1HC	1HE	1HG

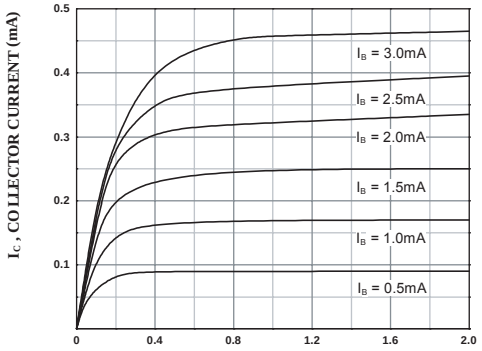


FIG.1 Static Characteristic

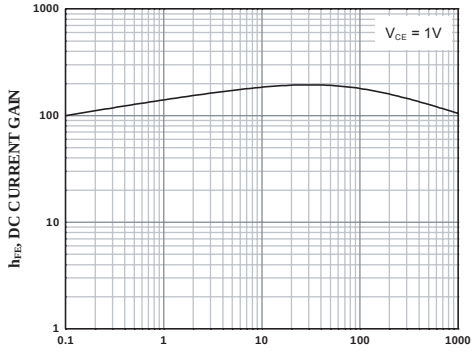


FIG.2 DC Current Gain

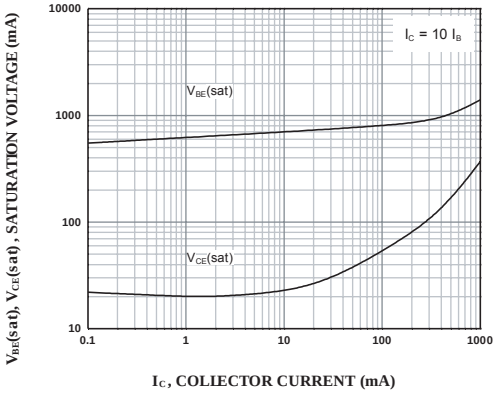


FIG.3 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

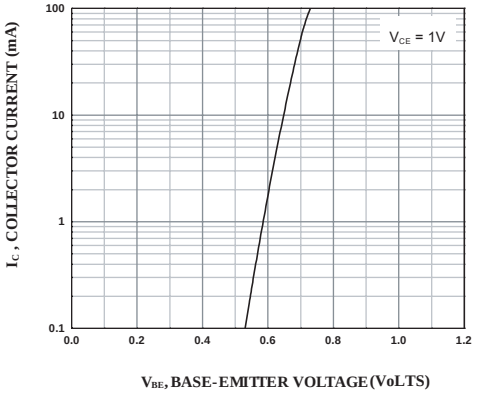


FIG.4 Base-Emitter On Voltage

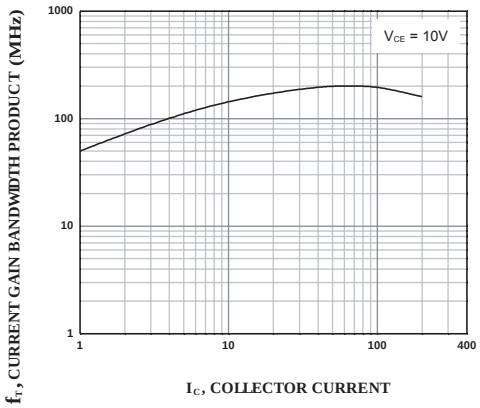
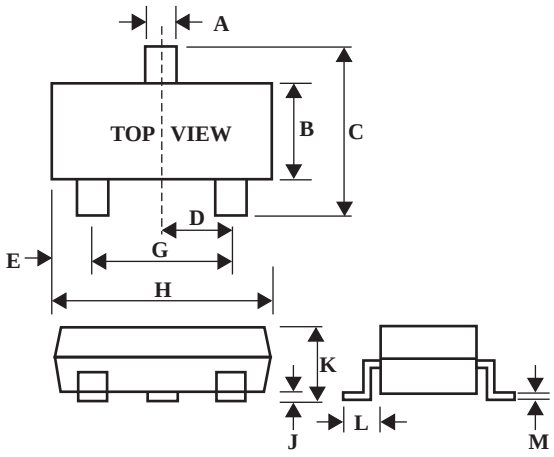


FIG.5 Current Gain Bandwidth Product

SOT-23 Outline Dimension



SOT-23		
Dim	**Min**	**Max**
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25