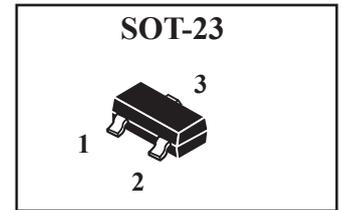
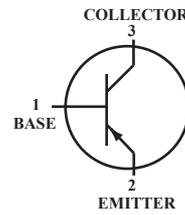


High-Voltage PNP Transistor Surface Mount

 Lead(Pb)-Free



Maximum Ratings

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	-400	Vdc
Collector-Base Voltage	V _{CBO}	-450	Vdc
Emitter-Base Voltage	V _{EBO}	-6.0	Vdc
Collector Current-Continuous	I _C	-300	mAdc

Thermal Characteristics

Characteristics	Symbol	Max	Unit
Total Device Dissipation FR-5 Board ⁽¹⁾ T _A =25°C Derate above 25°C	P _D	225 1.8	mW mW/°C
Thermal Resistance, Junction to Ambient	R _{θA}	556	°C/W
Total Device Dissipation Alumina Substrate, ⁽²⁾ T _A =25°C Derate above 25°C	P _D	350 2.8	mW mW/°C
Thermal Resistance, Junction to Ambient	R _{θA}	357	°C/W
Junction and Storage, Temperature	T _J , T _{stg}	-55 to +150	°C

Device Marking

MMBTA94=4D

Electrical Characteristics (T_A=25°C Unless Otherwise noted)

Characteristics	Symbol	Min	Max	Unit
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Off Characteristics

Collector-Emitter Breakdown Voltage ⁽³⁾ (I _C =-1.0mAdc, I _B =0)	V(BR)CEO	-400	-	Vdc
Collector-Base Breakdown Voltage (I _C =-100 uAdc, I _E =0)	V(BR)CBO	-450	-	Vdc
Emitter-Base Breakdown Voltage (I _E =-10 uAdc, I _C =0)	V(BR)EBO	-6.0	-	Vdc
Collect Cutoff Current (V _{CB} = -400Vdc, I _E =0)	I _{CBO}	-	100	nAdc
Emitte Cutoff Current (V _{EB} =-4V, I _C =0)	I _{EBO}	-	100	nAdc

1.FR-5=1.0 x 0.75 x 0.062 in.

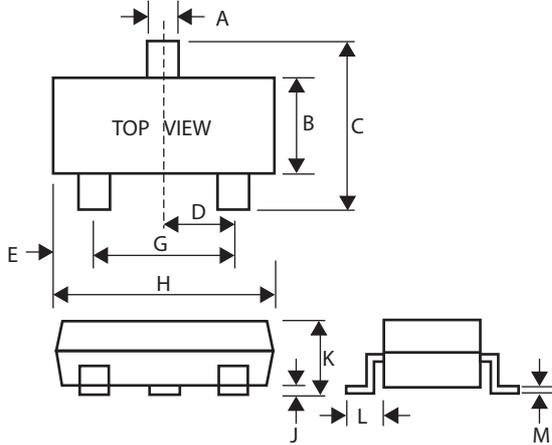
2.Alumina=0.4 x 0.3 x 0.024 in. 99.5% alumina.

3.Pulse Test:Pulse Width ≤300 μS, Duty Cycle ≤2.0%.

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted) (Continued)

Characteristics	Symbol	Min	Max	Unit
On Characteristics				
DC Current Gain ($I_C = -1.0\text{ mAdc}$, $V_{CE} = -10\text{ Vdc}$)	$H_{FE(1)}$	40	-	-
($I_C = -10\text{ mAdc}$, $V_{CE} = -10\text{ Vdc}$)	$H_{FE(2)}$	50	2.00	-
($I_C = -50\text{ mAdc}$, $V_{CE} = -10\text{ Vdc}$)	$H_{FE(3)}$	45	-	-
($I_C = -100\text{ mAdc}$, $V_{CE} = -10\text{ Vdc}$)	$H_{FE(4)}$	20	.	-
Collector-Emitter Saturation Voltage (3) ($I_C = -1.0\text{ mAdc}$, $I_B = -0.1\text{ mAdc}$) ($I_C = -10\text{ mAdc}$, $I_B = -1.0\text{ mAdc}$) ($I_C = -50\text{ mAdc}$, $I_B = -5.0\text{ mAdc}$)	$V_{CE(sat)}$	-	0.40 0.50 0.75	Vdc
Base-Emitter Saturation Voltage (3) ($I_C = -10\text{ mAdc}$, $I_B = -1.0\text{ mAdc}$)	$V_{BE(sat)}$	-	0.75	Vdc
Current-Gain-Bandwidth Product ($I_C = 10\text{ mAdc}$, $V_{CE} = -10\text{ Vdc}$, $f = 10\text{ MHz}$)	f_T	20	-	MHz

SOT-23 Package 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