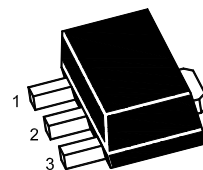




MPSA94U Silicon Epitaxial Planar Transistor

for high voltage switching and amplifier applications



1.Base 2.Collector 3.Emitter

SOT-89-3L

Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

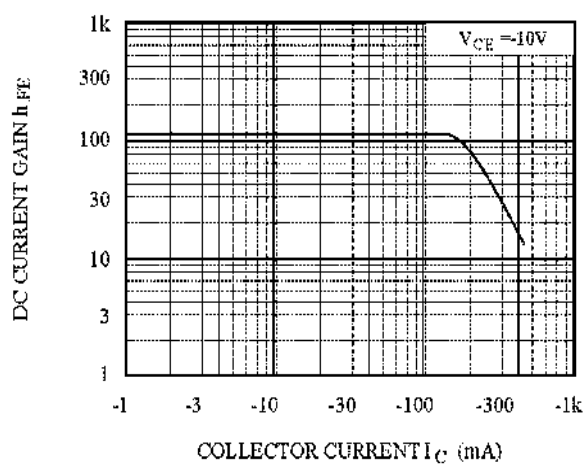
Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	400	V
Collector Emitter Voltage	$-V_{CEO}$	400	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	300	mA
Total Power Dissipation	P_{tot}	625	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^{\circ}\text{C}$

Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

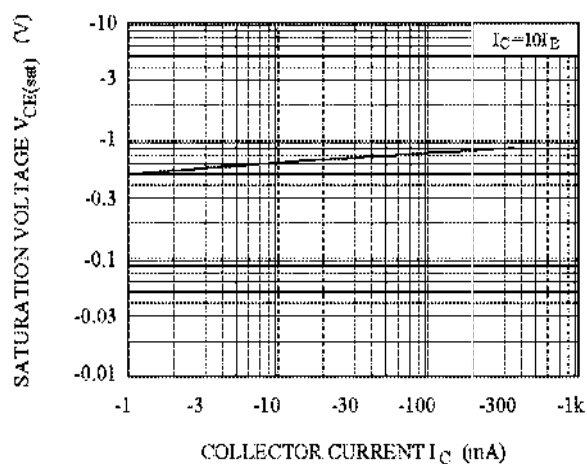
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at $-V_{CE} = 10\text{ V}$, $-I_C = 1\text{ mA}$	h_{FE}	70	-	-
at $-V_{CE} = 10\text{ V}$, $-I_C = 10\text{ mA}$	h_{FE}	80	300	-
at $-V_{CE} = 10\text{ V}$, $-I_C = 50\text{ mA}$	h_{FE}	70	-	-
at $-V_{CE} = 10\text{ V}$, $-I_C = 100\text{ mA}$	h_{FE}	60	-	-
Collector Base Cutoff Current at $-V_{CB} = 300\text{ V}$	$-I_{CBO}$	-	0.1	μA
Collector Emitter Cutoff Current at $-V_{CE} = 400\text{ V}$	$-I_{CES}$	-	1	μA
Emitter Base Cutoff Current at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	0.1	μA
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	400	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	400	-	V
Emitter Base Breakdown Voltage at $-I_E = 10\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	6	-	V
Collector Emitter Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 1\text{ mA}$ at $-I_C = 50\text{ mA}$, $-I_B = 5\text{ mA}$	$-V_{CE(sat)}$	- -	0.2 0.5	V
Base Emitter Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 1\text{ mA}$	$-V_{BE(sat)}$	-	0.75	V
Collector Output Capacitance at $-V_{CB} = 20\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	7	pF



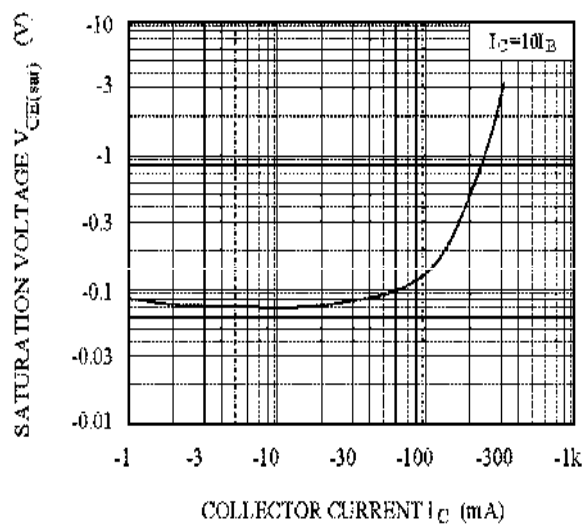
$h_{FE} - I_C$



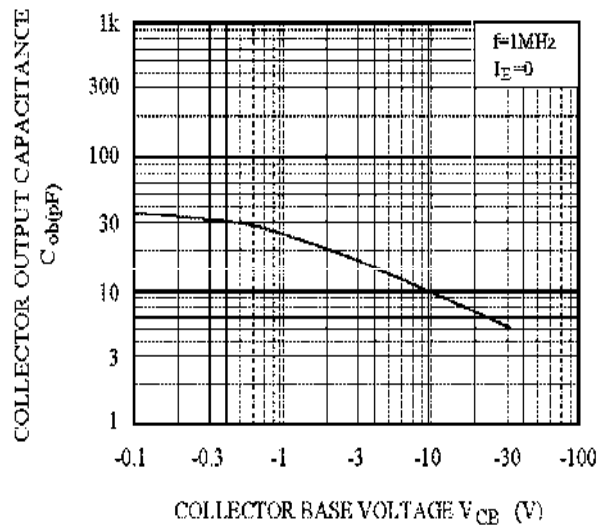
$V_{CE(sat)} - I_C$



$V_{CE(sat)} - I_C$

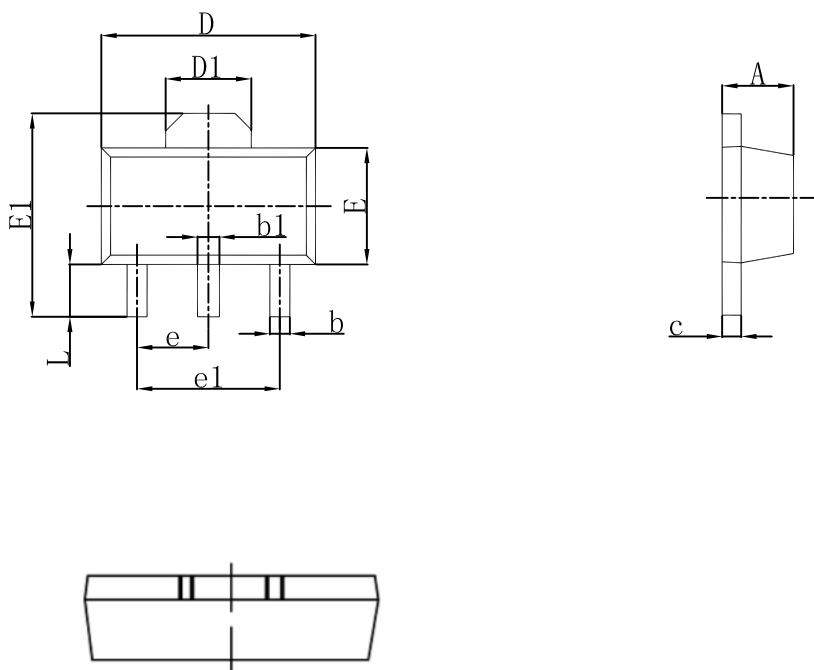


$C_{ob} - V_{CB}$





SOT-89-3L Outlines Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047