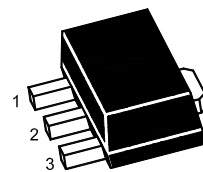




MPSA94U Silicon Epitaxial Planar Transistor

for high voltage switching and amplifier applications



1.Base 2.Collector 3.Emitter

SOT-89-3L

Absolute Maximum Ratings (T_a = 25 °C)

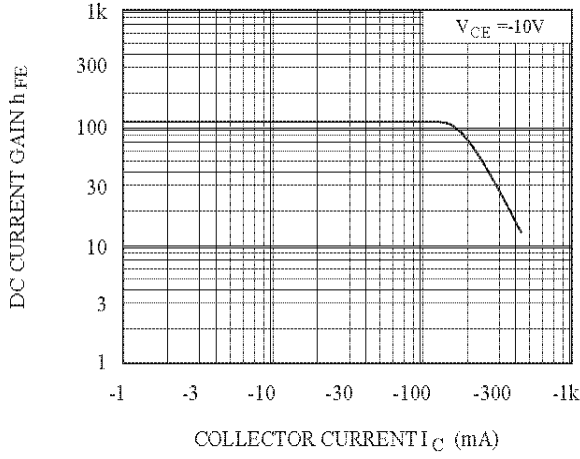
Parameter	Symbol	Value	Unit
Collector Base Voltage	-V _{CBO}	400	V
Collector Emitter Voltage	-V _{CEO}	400	V
Emitter Base Voltage	-V _{EBO}	6	V
Collector Current	-I _C	300	mA
Total Power Dissipation	P _{tot}	625	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

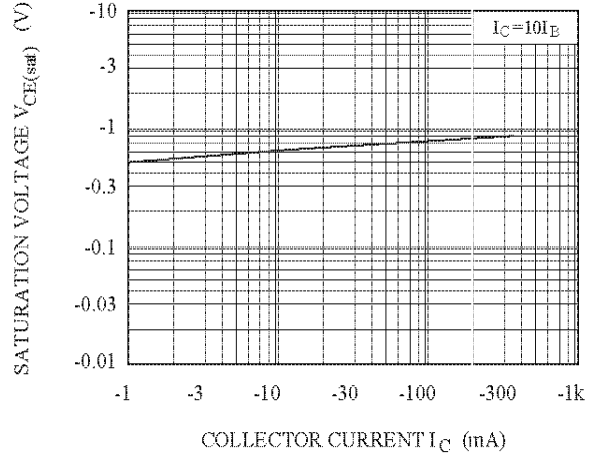
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at -V _{CE} = 10 V, -I _C = 1 mA	h _{FE}	70	-	-
at -V _{CE} = 10 V, -I _C = 10 mA	h _{FE}	80	300	-
at -V _{CE} = 10 V, -I _C = 50 mA	h _{FE}	70	-	-
at -V _{CE} = 10 V, -I _C = 100 mA	h _{FE}	60	-	-
Collector Base Cutoff Current				
at -V _{CB} = 300 V	-I _{CBO}	-	0.1	μA
Collector Emitter Cutoff Current				
at -V _{CE} = 400 V	-I _{CES}	-	1	μA
Emitter Base Cutoff Current				
at -V _{EB} = 4 V	-I _{EBO}	-	0.1	μA
Collector Base Breakdown Voltage				
at -I _C = 100 μA	-V _{(BR)CBO}	400	-	V
Collector Emitter Breakdown Voltage				
at -I _C = 1 mA	-V _{(BR)CEO}	400	-	V
Emitter Base Breakdown Voltage				
at -I _E = 10 μA	-V _{(BR)EBO}	6	-	V
Collector Emitter Saturation Voltage				
at -I _C = 10 mA, -I _B = 1 mA	-V _{CE(sat)}	-	0.2	V
at -I _C = 50 mA, -I _B = 5 mA	-V _{CE(sat)}	-	0.5	V
Base Emitter Saturation Voltage				
at -I _C = 10 mA, -I _B = 1 mA	-V _{BE(sat)}	-	0.75	V
Collector Output Capacitance				
at -V _{CB} = 20 V, f = 1 MHz	C _{ob}	-	7	pF



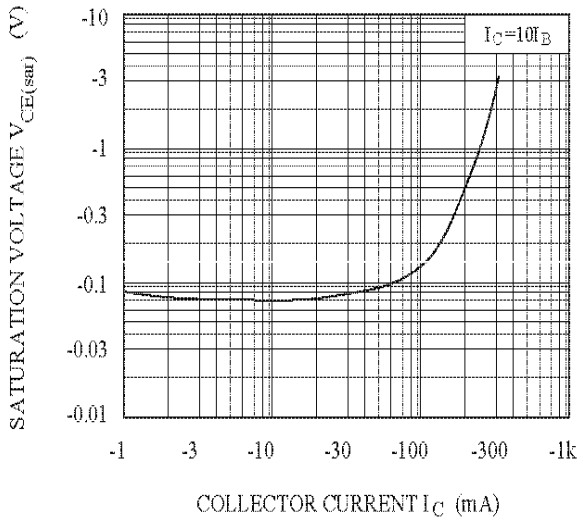
$h_{FE} - I_C$



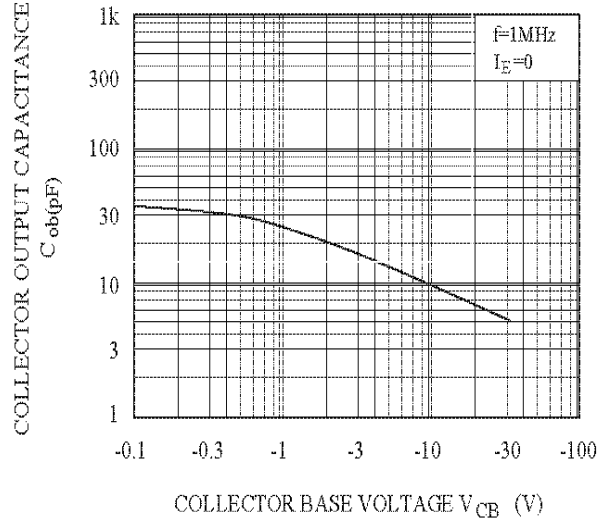
$V_{CE(sat)} - I_C$



$V_{CE(sat)} - I_C$

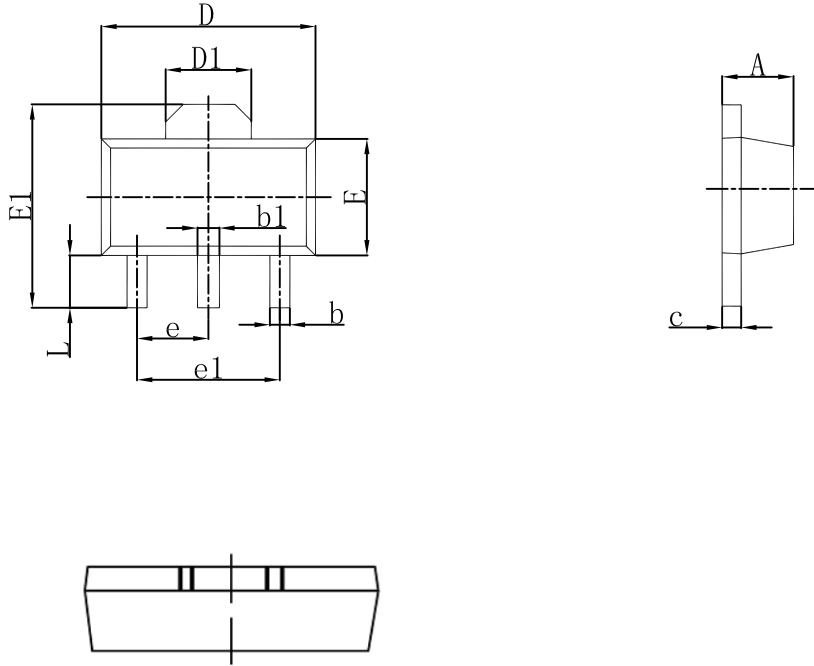


$C_{ob} - V_{CB}$





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