

SOT-89-3L Plastic-Encapsulate Transistors

TRANSISTOR(PNP)

FEATURES

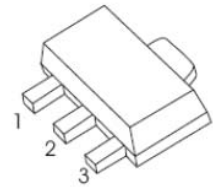
- High voltage: $V_{CEO}=-60V$
- High transistors frequency
- AEC-Q 101 qualified (Automotive grade with suffix " Q ")

MAXIMUM RATINGS ($T_a=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-1	A
P_C	Collector power dissipation	500	mW
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~150	$^{\circ}C$

SOT-89-3L

1. BASE
2. COLLECTOR
3. EMITTER

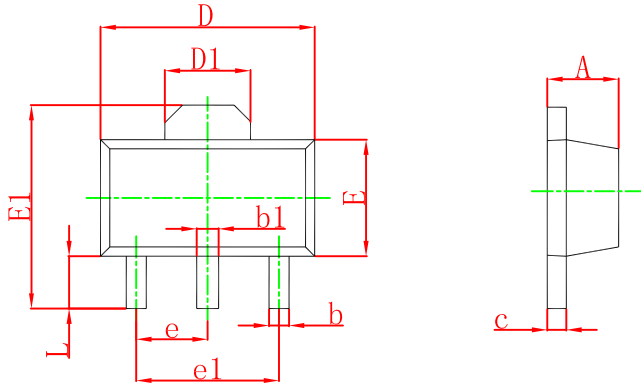
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-0.1mA, I_E=0$	-80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-0.1mA, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-50V, I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-4V, I_C=0$			-0.1	μA
DC current gain	h_{FE1}	$V_{CE}=-2V, I_C=-50mA$	60		320	
	h_{FE2}	$V_{CE}=-2V, I_C=-1A$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500mA, I_B=-50mA$			-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-500mA, I_B=-50mA$			-1.2	V
Transition frequency	f_T	$V_{CE}=-10V, I_C=-50mA, f=100MHz$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V, I_E=0, f=1MHz$		12		pF

CLASSIFICATION of h_{FE1}

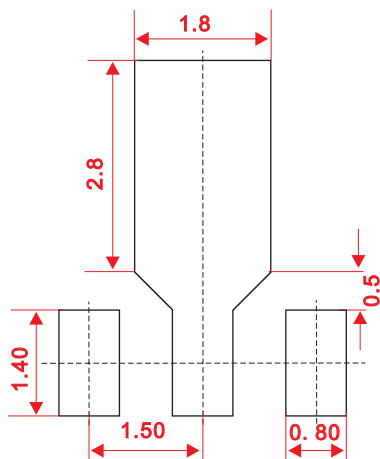
Rank	O	Y	GR
Range	60-120	100-200	160-320
Marking	JO	JY	JGR

SOT-89-3L Package Outline 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

SOT-89-3L Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.