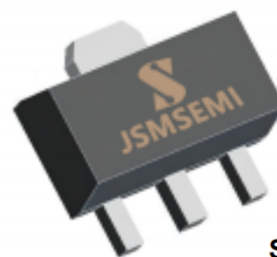


■ Features

- Low saturation voltage, typically $V_{CE(sat)} = 0.1V$ at $I_C/I_B = 1A/50mA$.
- Excellent DC current gain characteristics.


SOT-89

1.BASE

2.COLLECTOR

3.EMITTER

■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	3	A
	I_C (Pulse) *1	6	A
Collector power dissipation	P_C	0.5	W
	P_C *2	2	W
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

 *1. Single pulse, $P_w = 10ms$

 *2. 40X40X[†] 0.7mm Ceramic board

■ Electrical Characteristics $T_a = 25^\circ C$

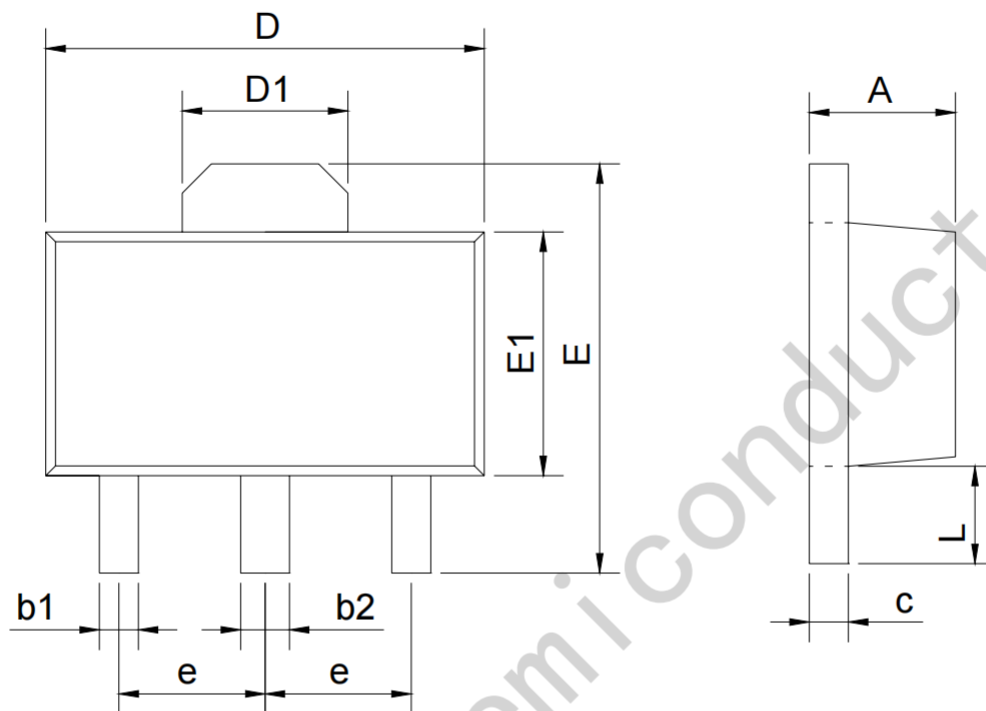
Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C = 50\mu A$	60			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C = 1mA$	50			V
Emitter-base breakdown voltage	V_{EBO}	$I_E = 50\mu A$	6			V
Collector cutoff current	I_{CBO}	$V_{CB} = 60V$			0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5V$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 2V, I_C = 0.5A$	82		390	
		$V_{CE} = 2V, I_C = 1.5A$	45			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1A, I_B = 50mA$		0.13	0.35	V
Output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0A, f = 1MHz$		25		pF
Transition frequency	f_T	$V_{CE} = 2V, I_E = -0.5A, f = 100MHz$		210		MHz

■ h_{FE} Classification

Rank	P	Q	R
h_{FE}	82~180	120~270	180~390

Package Information

SOT-89



SYMBOL	mm	
	min	max
A	1.40	1.60
b1	0.35	0.50
b2	0.45	0.60
c	0.36	0.46
D	4.30	4.70
D1	1.40	1.80
E	4.00	4.40
E1	2.30	2.70
e	1.50BSC	
L	0.80	1.20