



YOUSHANG SEMICONDUCTOR

设计研发新型功率器件

各类小信号开关

中低压及高压大电流等场效应管

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企业微信二维码



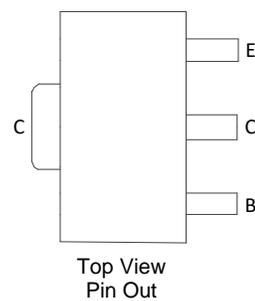
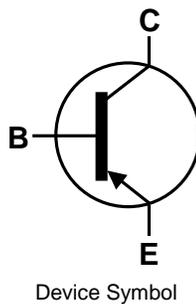
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Features

- $BV_{CEO} = -20V$
- $I_C = -1A$ High Continuous Current
- $I_{CM} = -2A$ Peak Pulse Current
- Low Saturation Voltage $V_{CE(sat)} < -0.5V @ -1A$
- Complementary NPN Type: NK-BCX6825

Mechanical Data

- Package: SOT89
- Package Material: Molded Plastic. "Green" Molding Compound. UL Flammability Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208 
- Weight: 0.05 grams (Approximate)



Absolute Maximum Ratings (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	-25	V
Collector-Emitter Voltage	V_{CEO}	-20	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-1	A
Peak Pulse Current	I_{CM}	-2	A

Thermal Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P_D	1	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note: 5. For a device surface mounted on 15mm x 15mm x 0.6mm FR4 PCB with high coverage of single sided 1oz copper, in still air conditions; device measured when operating in steady-state condition.

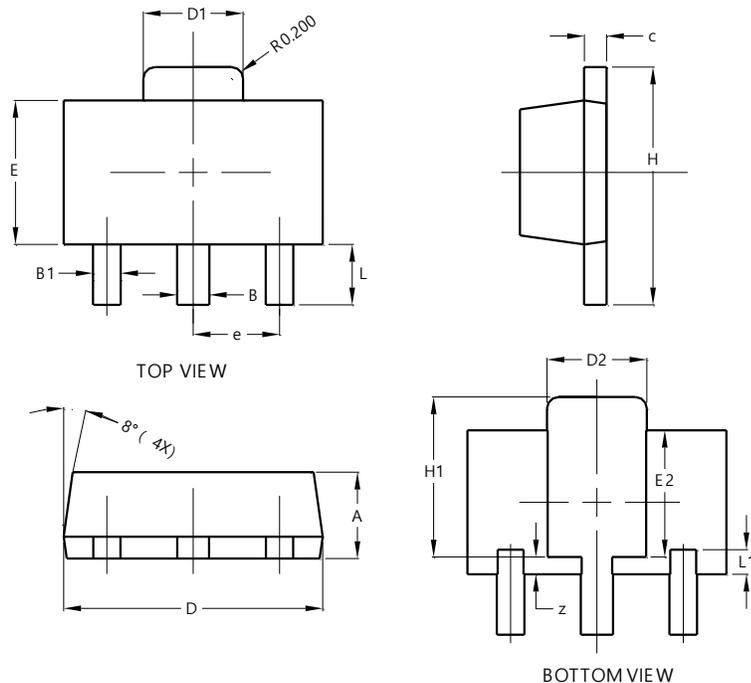
Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	BV_{CB0}	-25	—	—	V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage (Note 6)	BV_{CEO}	-20	—	—	V	$I_C = -10\text{mA}$
Emitter-Base Breakdown Voltage	BV_{EBO}	-7	—	—	V	$I_E = -100\mu\text{A}$
Collector Cutoff Current	I_{CBO}	—	—	-0.1 -10	μA	$V_{CB} = -25\text{V}$ $V_{CB} = -25\text{V}, T_A = +150^\circ\text{C}$
Emitter Cutoff Current	I_{EBO}	—	—	-20	nA	$V_{EB} = -6\text{V}$
Collector-Emitter Saturation Voltage (Note 6)	$V_{CE(sat)}$	—	—	-0.5	V	$I_C = -1\text{A}, I_B = -100\text{mA}$
Base-Emitter Turn-On Voltage (Note 6)	$V_{BE(on)}$	—	—	-1.0	V	$I_C = -1\text{A}, V_{CE} = -1\text{V}$
Static Forward Current Transfer Ratio (Note 6)	h_{FE}	160	250	400	—	$I_C = -0.5\text{A}, V_{CE} = -1\text{V}$
Transitional Frequency	f_T	100	—	—	MHz	$I_C = -100\text{mA}, V_{CE} = -5\text{V}, f = 100\text{MHz}$
Output Capacitance	C_{ob0}	—	—	25	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$

Note: 6. Measured under pulsed conditions. Pulse width $\leq 300\mu\text{s}$. Duty cycle $\leq 2\%$.

Package Outline Dimensions

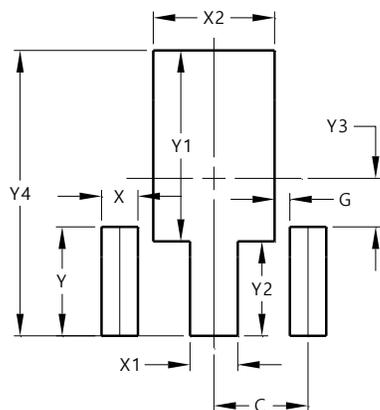
SOT89



SOT89			
Dim	Min	Max	Typ
A	1.40	1.60	1.50
B	0.50	0.62	0.56
B1	0.42	0.54	0.48
c	0.35	0.43	0.38
D	4.40	4.60	4.50
D1	1.62	1.83	1.733
D2	1.61	1.81	1.71
E	2.40	2.60	2.50
E2	2.05	2.35	2.20
e	-	-	1.50
H	3.95	4.25	4.10
H1	2.63	2.93	2.78
L	0.90	1.20	1.05
L1	0.327	0.527	0.427
z	0.20	0.40	0.30
All Dimensions in mm			

Suggested Pad Layout

SOT89



Dimensions	Value (in mm)
C	1.500
G	0.244
X	0.580
X1	0.760
X2	1.933
Y	1.730
Y1	3.030
Y2	1.500
Y3	0.770
Y4	4.530