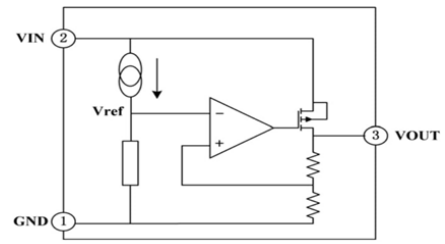


Features

- Low power consumption
- Low voltage drop
- Low temperature coefficient
- High input voltage
- Ultra low quiescent current: 1.5 μ A(typ.)
- Output voltage accuracy: tolerance $\pm 2\%$
- Output current: 100mA(typ.)

HF

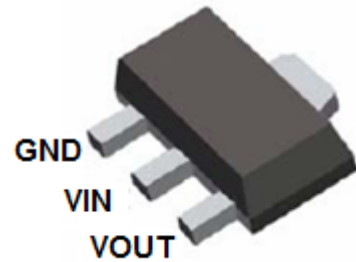


Typical Applications

- Battery-powered equipment
- Audio/Video equipment
- Communication equipment

Mechanical Data

- Case: SOT-89
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOT-89

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BL7533E	SOT-89	1000 pcs / Tape & Reel	7533

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

Parameter	Symbol	Value	Unit
Supply Voltage	V_{IN}	-0.3 ~ +24	V

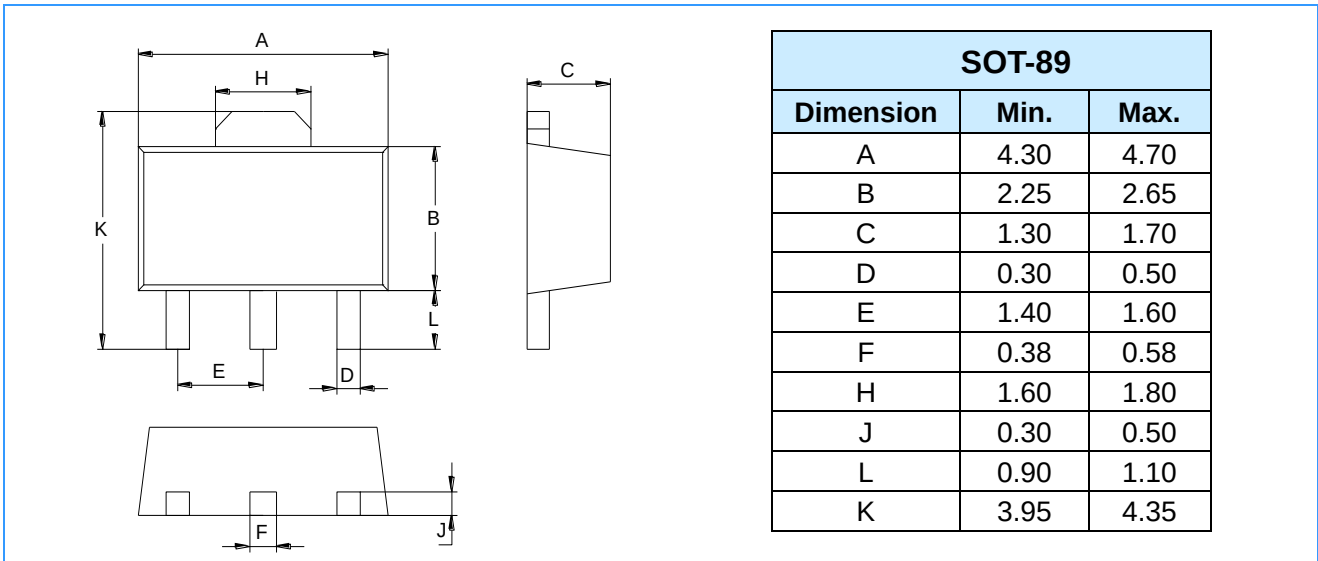
Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	0.5	W
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	200	$^\circ\text{C/W}$
Operating Temperature Range	T_J	-40 ~ +85	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-50 ~ +125	$^\circ\text{C}$

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

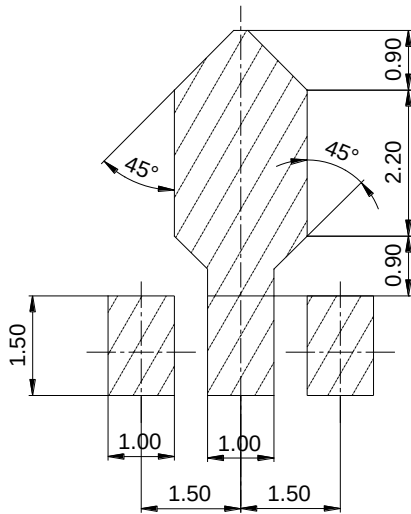
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Voltage	V_{OUT}	$V_{IN} = V_{OUT} + 2.0\text{V}$, $I_{OUT} = 10\text{mA}$	3.234	3.30	3.366	V
Output Current	I_{OUT}	$V_{IN} = V_{OUT} + 2.0\text{V}$	70	100	-	mA
Load Regulation	ΔV_{OUT}	$V_{IN} = V_{OUT} + 2.0\text{V}$ $1\text{mA} \leq I_{OUT} \leq 50\text{mA}$	-	25	60	mV
Voltage Drop	V_{DIF}	$I_{OUT} = 1\text{mA}$, $\Delta V_{OUT} = 2\%$	-	25	55	mV
Current Consumption	I_{SS}	No Load	-	1.5	3.0	μA
Line Regulation	$\Delta V_{OUT}/(\Delta V_{IN} \cdot V_{OUT})$	$V_{OUT} + 1\text{V} \leq V_{IN} \leq 24\text{V}$ $I_{OUT} = 1\text{mA}$	-	-	0.2	%/V
Input Voltage	V_{IN}	-	-	-	24	V
Temperature Coefficient	$\Delta V_{OUT}/(\Delta T_A \cdot V_{OUT})$	$V_{IN} = V_{OUT} + 2.0\text{V}$, $I_{OUT} = 10\text{mA}$ $-40^\circ\text{C} \leq T_A \leq 85^\circ\text{C}$	-	100	-	ppm/ $^\circ\text{C}$

Package Outline Dimensions (Unit: mm)



Package Outline Dimensions (Unit: mm)

SOT-89



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