

General Description

The LB6206A Series are highly precise, low power consumption, 3 terminal, positive voltage regulators manufactured using CMOS technologies

The LB6206A Series consists of a current limiter circuit, a driver transistor, a precision reference voltage and an error correction circuit. The series is compatible with low ESR ceramic capacitors. The current limiter's foldback circuit operates as a short circuit protection as well as the output current limiter for the output pin.

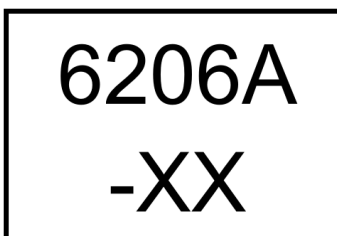
Features

- Quiescent Current: 8 μ A
- Input Voltage Range: Max.6V
- Output Current: 300mA
- Low Dropout Voltage: 290mV@100mA (VOUT=3.3V)
- Output Voltage: 1.2~5.0V
- Output Voltage Accuracy: $\pm 2\%$ (Typ.)
- Low Power Consumption

Applications

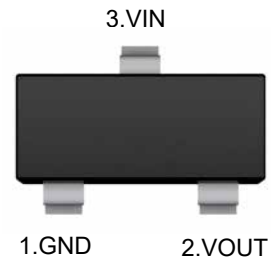
- Mobile Phones
- Battery powered equipment
- Portable game consoles
- Reference voltage sources

Marking Code

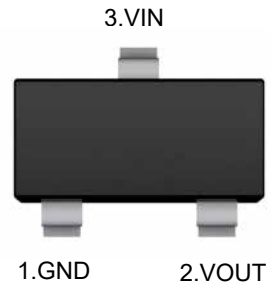


Marking information:
XX:Output Voltage

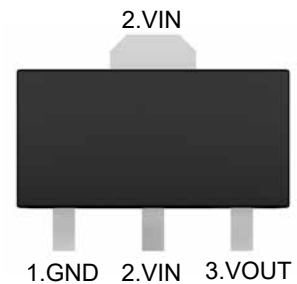
SOT-23



SOT-23-3



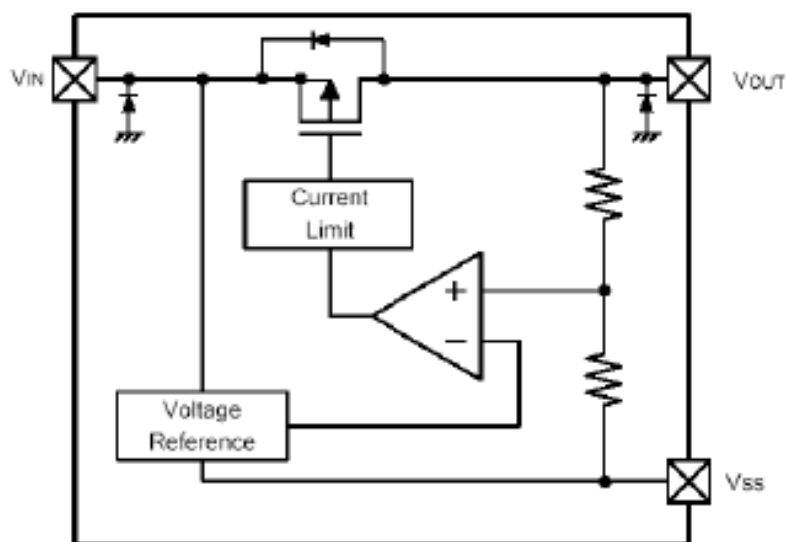
SOT-89



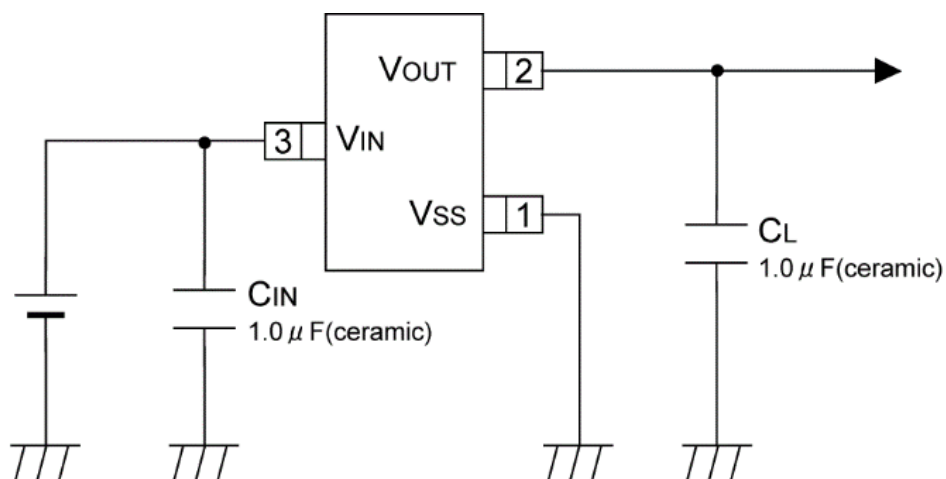
Ordering Information

LB6206A-	□	□	□	□
				Package Type
				SA : SOT-23
				SC : SOT-23-3
				SQ : SOT-89
				Output Voltage
				12 : 1.2V 15 : 1.5V 18 : 1.8V
				25 : 2.5V 28 : 2.8V 30 : 3.0V
				33 : 3.3V 50 : 5.0V
				Output current tap
				L : 300mA
				Version Number

Block Diagram



Typical Application Circuit



Absolute Maximum Ratings ^{Note1}

Ratings at 25°C ambient temperature unless otherwise specified.

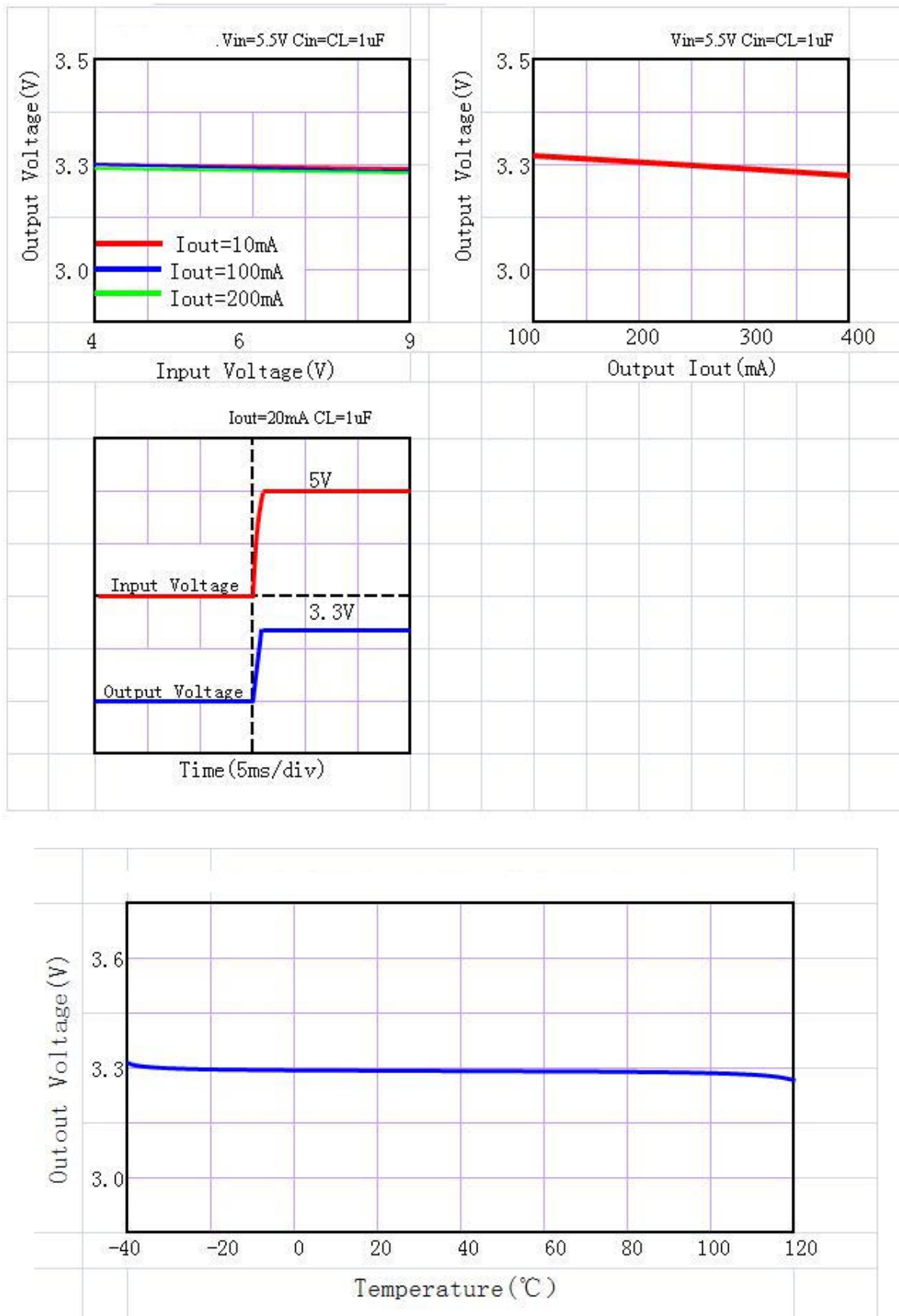
Parameter	Symbol	Value	Unit
Input Voltage	V_{IN}	-0.3 ~ +6	V
Output Voltage	V_{OUT}	-0.3 ~ ($V_{IN}+0.3$)	V
Output Current	I_{OUT}	300	mA
Power Dissipation	SOT-23	200	mW
	SOT-23-3	250	mW
	SOT-89	500	mW
Operating Temperature Range	T_{opr}	-20 ~ 85	°C
Storage Temperature Range	T_{stg}	-55 ~ 125	°C

Electrical Characteristics

($V_{IN}=V_{OUT}+1$, $C_{IN}=C_{OUT}=1\mu F$, $T_A=25^\circ C$, unless otherwise noted.)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input Voltage		V_{IN}				6	V
Output Voltage Accuracy		ΔV_{OUT}	$I_{OUT}=30mA$	-2		+2	%
Quiescent Current		I_Q	$I_{OUT}=0mA$		8	15	μA
Dropout Voltage		V_{DROP}	$I_{OUT}=100mA, V_{OUT}\leq 1.5V$			570	mV
			$I_{OUT}=100mA, 1.8V\leq V_{OUT}\leq 2.5V$			420	
			$I_{OUT}=100mA, 2.8V\leq V_{OUT}\leq 5V$			350	
Line Regulation		ΔV_{LINE}	$V_{IN}=V_{OUT}+1$ to 6V $I_{OUT}=40mA$			0.2	%/V
Load Regulation		ΔV_{LOAD}	$1mA<I_{OUT}<80mA$		12	30	mV
Output Voltage Temperature Coefficient		TC_{VOUT}	$I_{OUT}=30mA$, $T_A=0\sim 70^\circ C$		± 100		ppm/ $^\circ C$
PSRR	f=1KHz	PSRR	$I_{OUT}=100mA$		-70		dB
Output Noise		E_{NO}	BW=10Hz~100KHz		160		μV_{RMS}

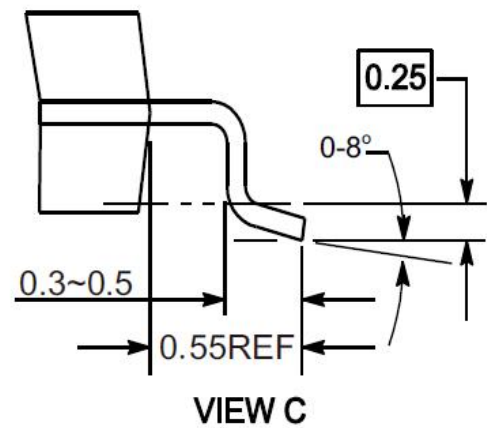
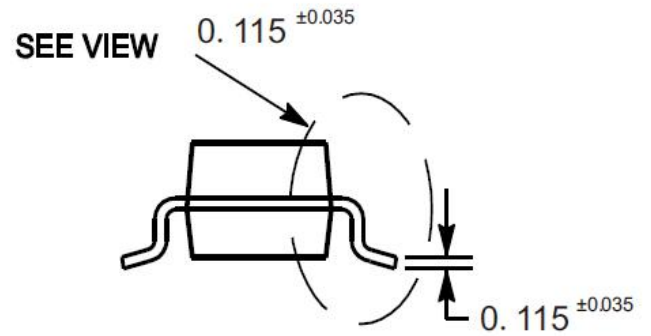
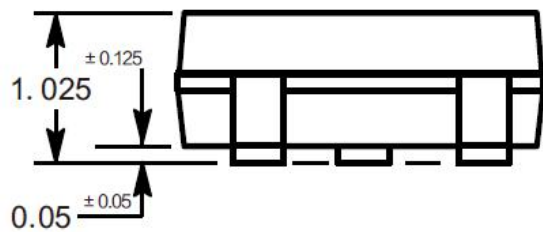
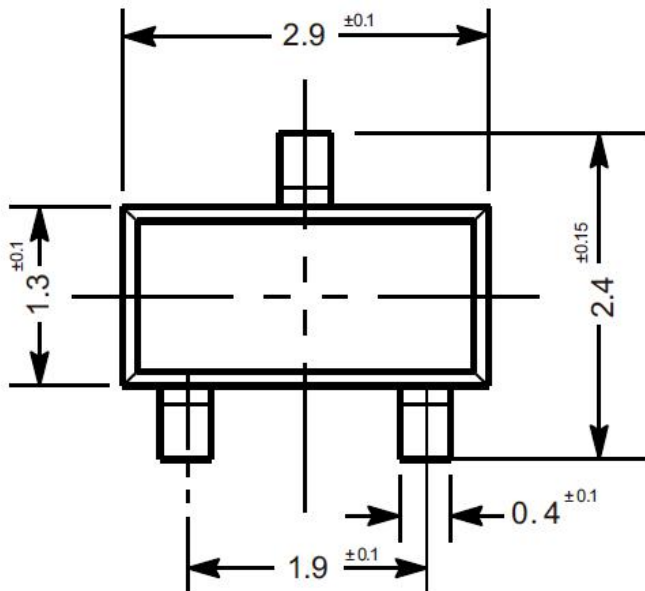
Typical Characteristics Curves



Package Outline

SOT-23

Dimensions in mm



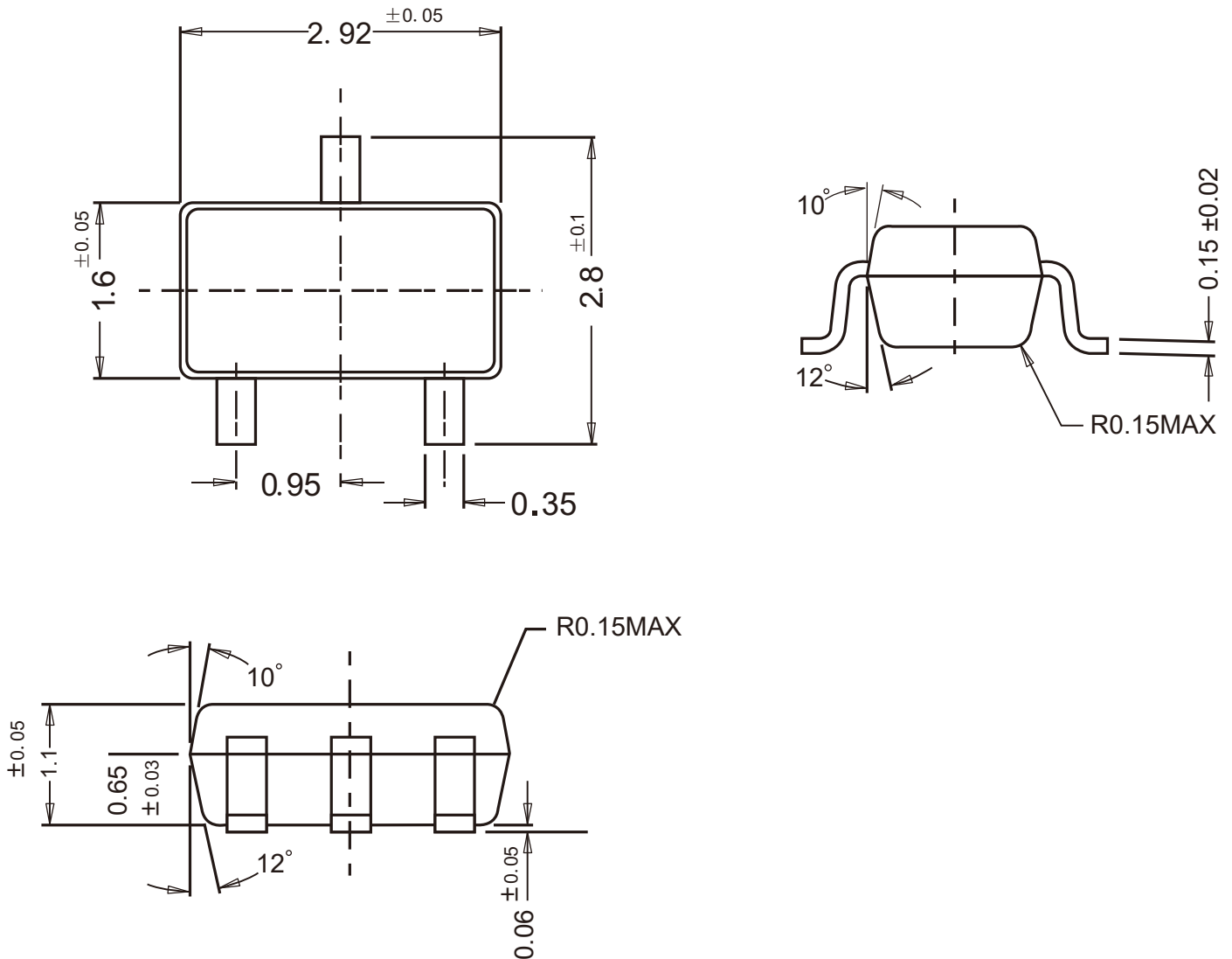
Ordering Information

Device	Package	Shipping
LB6206A Series	SOT-23	3,000/ Tape & Reel (7 inches)

Package Outline

SOT-23-3

Dimensions in mm



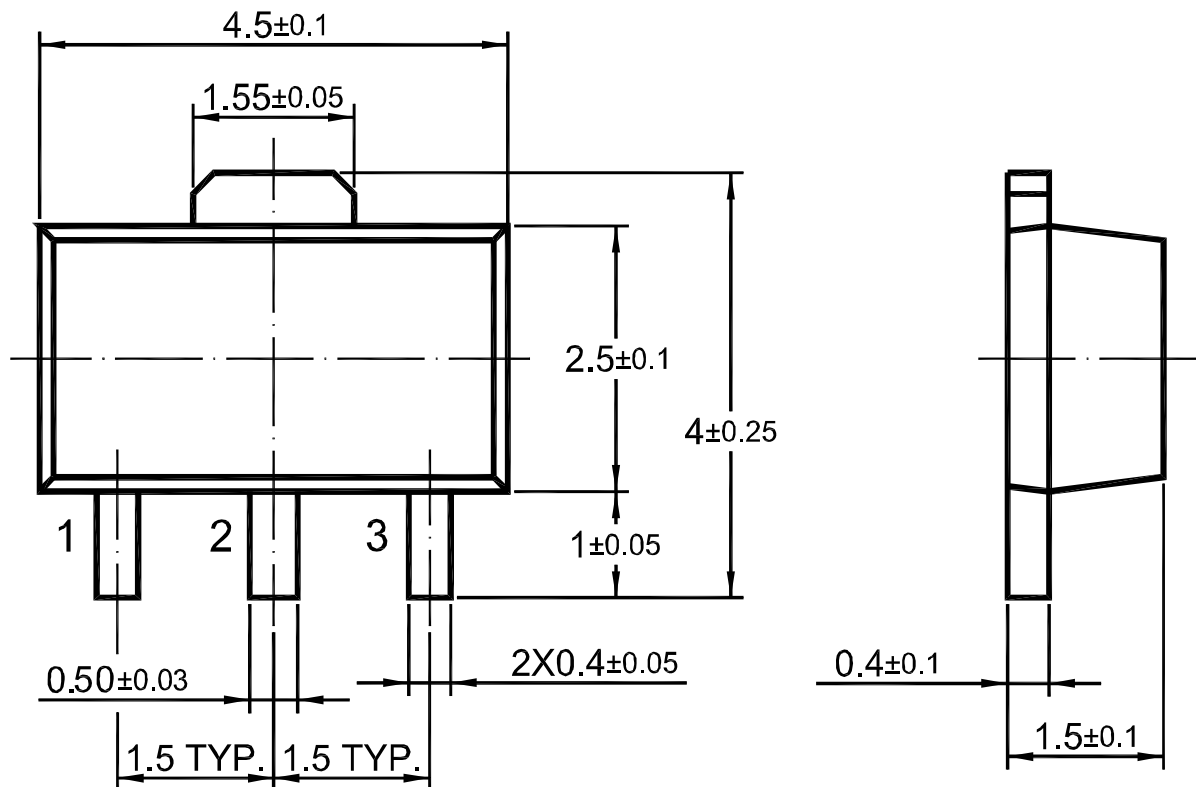
Ordering Information

Device	Package	Shipping
LB6206A Series	SOT-23-3	3,000/ Tape & Reel (7 inches)

Package Outline

SOT-89

Dimensions in mm



Ordering Information

Device	Package	Shipping
LB6206A Series	SOT-89	1,000/ Tape & Reel (7 inches)