Features

- Low power consumption
- Low voltage drop
- Low temperature coefficient
- Low Quiescent Current: 40μA
- Output voltage accuracy: tolerance ±2%

Applications

- Battery-powered equipment
- Reference voltage sources
- Cameras,video cameras
- Portable AV systems
- Mobile phones
- Portable games

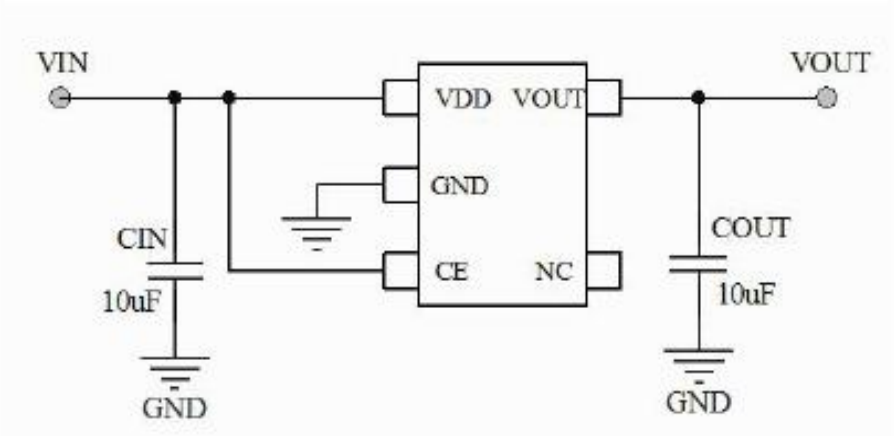
General Description

MLS6219 series are a highly precise,lower consumption, 3 terminal,positive voltage regulators manufactured using CMOS and laser trimming technologies. The series provides large currents with a significantly small dropout voltage .

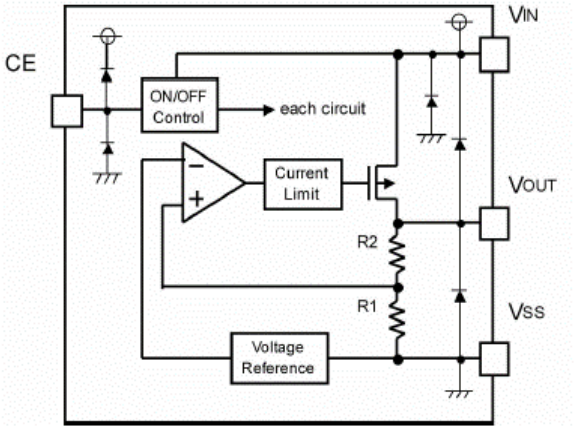
The MLS6219 consists of a current limiter circuit, a driver transistor, a precision reference voltage and an error correction circuit. The series is compatible with low ESR ceramic capacitors. The current limiter's foldback circuit operates as a short circuit protection as well as the output current limiter for the output pin. Output voltages are internally by laser trimming technologies. It is selectable in 0.1V increments within a range of 1.2V to 5.0V. MLS6219 series are available in SOT-23-5L and SOT-89 packages.

Pb-Free RoHS Halogen-Free

Typical Application

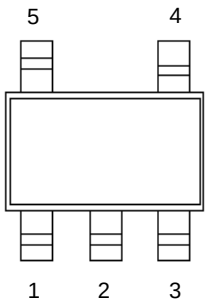


Block Diagram

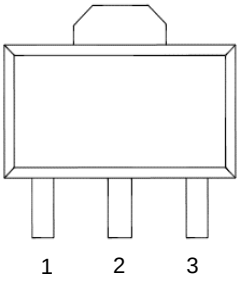


Packages And Pin Assignment

SOT-23-5L



SOT-89



Pin No.		Name	Description
SOT-23-5L	SOT-89		
2	1	GND	Ground pin
5	3	VOUT	Regulator Output pin.
1	2	VIN	Power Supply Voltage input.
3	-	EN	Enable Input Logic, Active High. When the EN goes to a logic low, the device will be shutdown mode. This pin cannot be left floating to enable the device. The maximum voltage must remain below 6.5 V.
4	-	NC	No Internal Connection.

Marking Rule

VOLTAGE(V)	MARKING
1.2	
1.5	4XEK
1.8	4XKK
2.5	4XTK
2.8	4XXK
3.0	4XZK
3.3	4B2K

Absolute Maximum Ratings

*$I_{OUT}=P_d/(V_{IN}-V_{OUT})$

Parameter		Symbol	Ratings	Units
Input Voltage		V_{IN}	V_{SS}-0.3~V_{IN}+8	V
Output Current		I_{OUT}	350	mA
Output Voltage		V_{OUT}	V_{SS}-0.3~V_{IN}+0.3	V
Power Dissipation	SOT-23-5L	P_d	400	mW
	SOT-89		600	mW
Operating Temperature Range		T_{opr}	-40~+85	℃
Storage Temperature Range		T_{stg}	-55~+125	℃

Electrical Characteristics

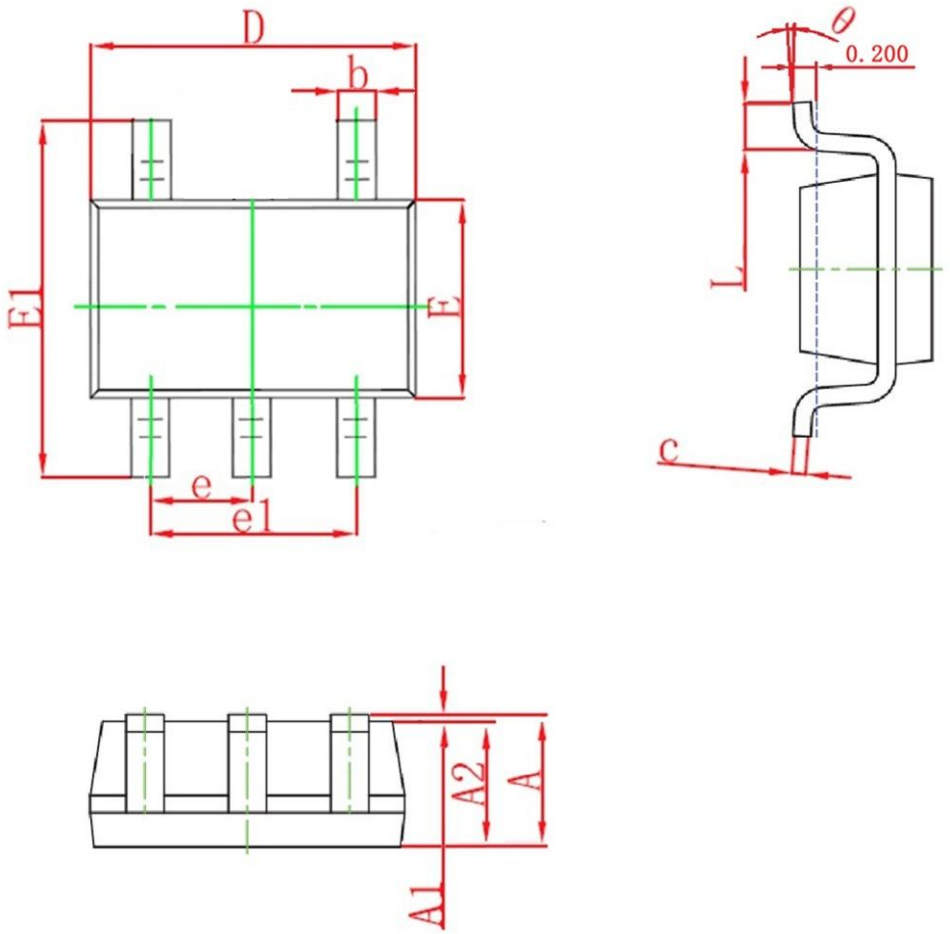
MLS6219 for any output voltage

Ta=25℃

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{OUT}	Output Voltage	Vin=Vout+1V 1.0mA≤Iout≤30mA	Vout×0.98	-	Vout×1.02	V
I_{OUT}	Output Current*1	Vin-Vout=1V	-	350	-	mA
Vdrop	Dropout Voltage	I_{OUT}=100mA	-	120	-	mV
$\frac{\Delta VOUT1}{\Delta VIN \times VOUT}$	Line Regulation	4.3V≤Vin≤8V Iout=10mA	-	0.05	0.2	%/V
$\frac{\Delta VOUT}{IOUT}$	Load Regulation	Vin= 4.3V 1.0mA≤Iout≤100mA	-	10	30	mV
$\frac{\Delta VOUT}{Ta \times VOUT}$	Output voltage Temperature Coefficiency	Iout=30mA 0℃≤Ta≤70℃	-	100	-	Ppm/℃
I_{SS}	Supply Current	-	-	40	-	μA
V_{IN}	Input Voltage	-	-	-	8.0	V
PSRR	PSRR	F=1KHz Vin=4.3Vdc+1Vpp	-	60	-	dB
V_{ENH}	EN high level	-	1.0	-	-	V
V_{ENL}	EN low level	-	-	-	0.4	V

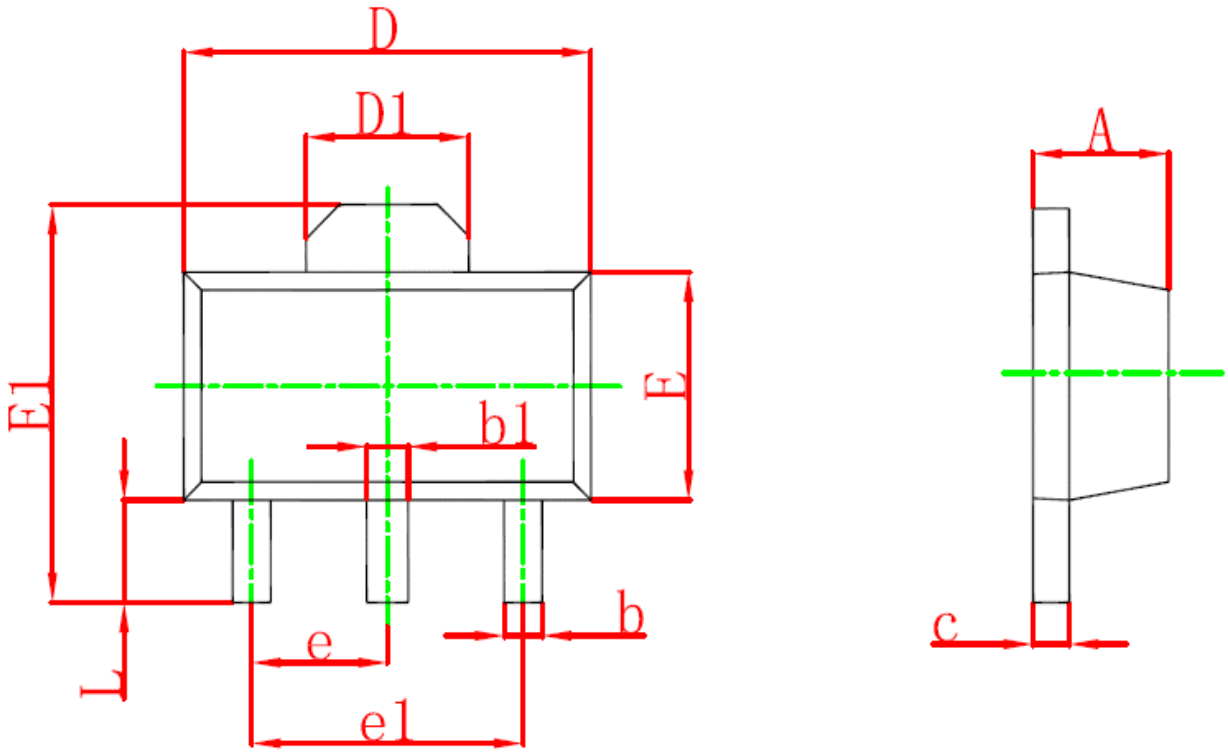
Package Information

SOT-89



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

SOT-89



Symbol	Dimensions in Millimeters(mm)		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