

### Features

- Low power consumption
- Low voltage drop
- Low temperature coefficient
- Low Quiescent Current: 1.5uA at 6V
- Output voltage accuracy: tolerance  $\pm 2\%$

### Applications

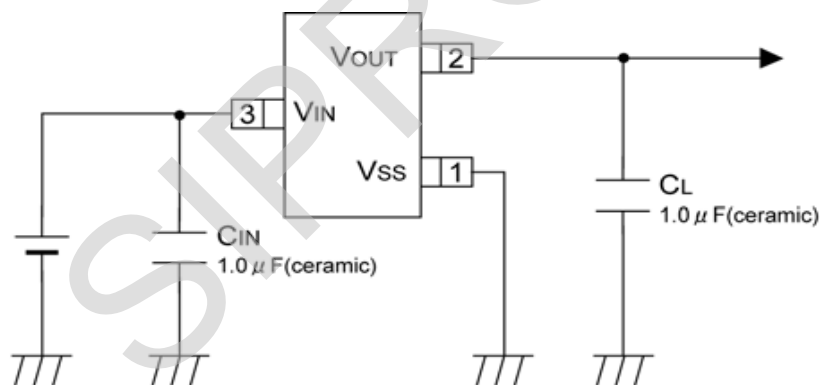
- Battery-powered equipment
- Reference voltage sources
- Cameras, video cameras
- Portable AV systems
- Mobile phones
- Portable games

### General Description

H7605 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 H7605 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 fold back 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. H7605 series are available in SOT-23, SOT23-3 and SOT-89 packages.

### Typical Application



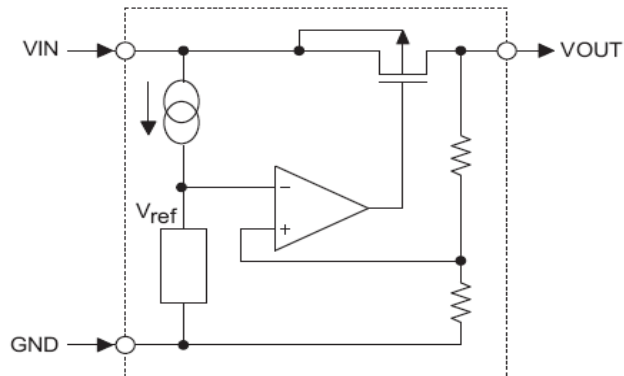
### Order Information

H7605-①②③④

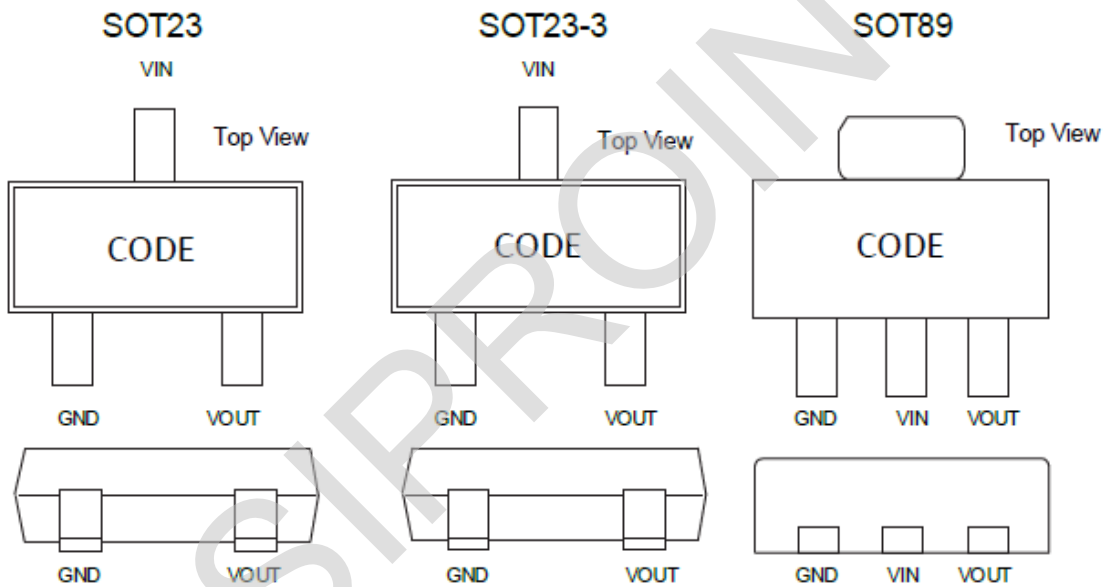
Designator	Symbol	Description
① ②	Integer	Output Voltage(1.2V~5.0V)
③	N	Package:SOT23
	M	Package:SOT23-3
	P	Package:SOT89-3
④	R	RoHS / Pb Free
	G	Halogen Free

Note: "①②" stands for output voltages. Other voltages can be specially customized

### Block Diagram



### Pin Assignment



### Absolute Maximum Ratings

Parameter	Symbol	Ratings	Units
Input Voltage	$V_{IN}$	10	V
Output Current	$I_{OUT}$	300*	mA
Output Voltage	$V_{OUT}$	$V_{SS}-0.3 \sim V_{IN}+0.3$	V
Power Dissipation	SOT-23	0.20	W
	SOT-89	0.50	W
	SOT23-3	0.20	W
Operating Temperature Range	$T_{opr}$	-40~+85	°C
Storage Temperature Range	$T_{stg}$	-55~+125	°C

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

### Electrical Characteristics

H7605 for any output voltage

(Ta=25°C)

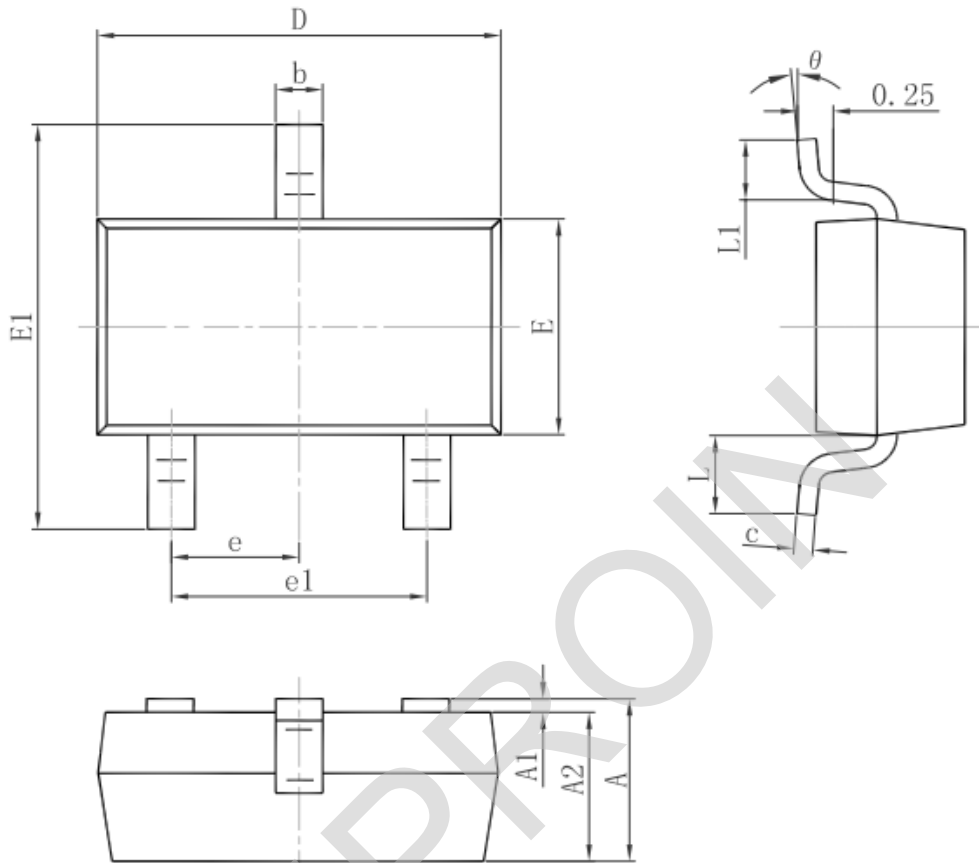
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Voltage	Vout	Vin=Vout+1V 1.0mA≤Iout≤30mA	Vout×0.98	--	Vout×1.02	V
Output Current*1	Iout	Vin-Vout=1V	--	300	--	mA
Low dropout*2	Vdrop	Refer to the next table				
Line Regulation	$\Delta V_{out}/(V_{in} \cdot V_{out})$	1.6V≤Vin≤6.5V Iout=40mA	--	0.05	0.2	%/V
Load Regulation	$\Delta V_{out}/\Delta I_{out}$	Vin=Vout+1V 1.0mA≤Iout≤80mA	--	12	30	mV
Output voltage Temperature Coefficiency	$\Delta V_{out}/(T_a \cdot V_{out})$	Iout=30mA 0°C≤Ta≤70°C	--	±75	--	Ppm/°C
Supply Current	Iss	--	--	1.5	2	uA
Input Voltage	Vin	--	--	6	8	V

Electrical Characteristics by Output Voltage:

Output Voltage Vout(V)	Dropout Voltage Vdif (V)		
	Conditions	Typ.	Max.
Vout≤1.5V	Iout=100 mA	0.35	0.57
Vout=1.6V		0.32	0.50
Vout=1.7V		0.30	0.45
1.8 ≤ Vout ≤ 2		0.28	0.42
2.1 ≤ Vout ≤ 2.7		0.25	0.38
2.8 ≤ Vout ≤ 5.0		0.19	0.35

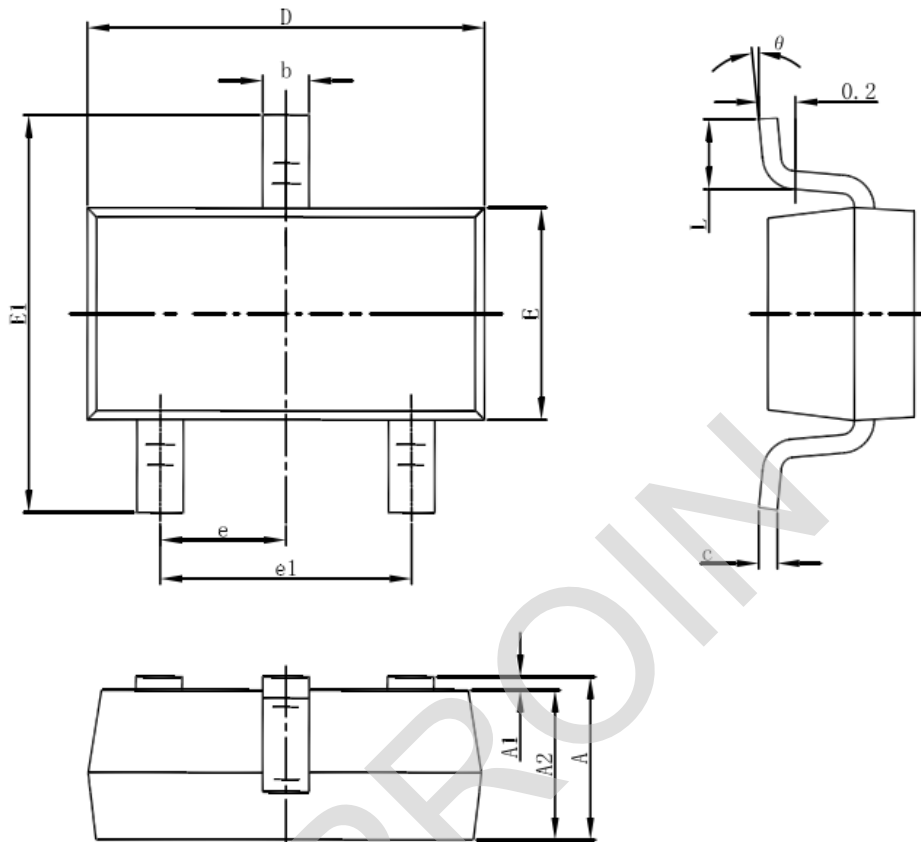
### Package Information

#### 3-pin SOT23 Outline Dimensions



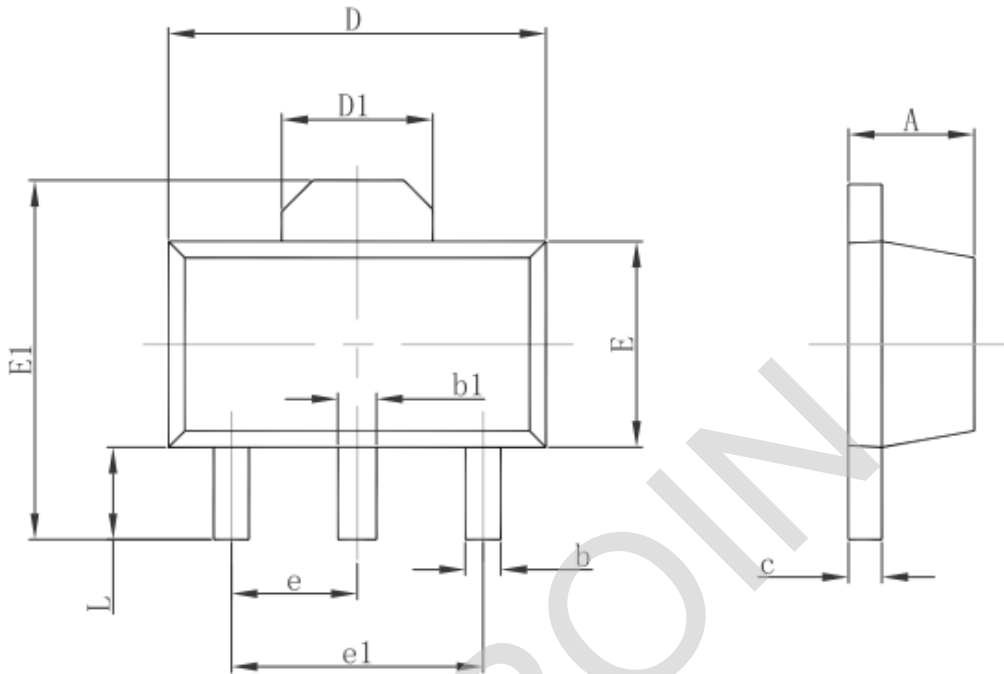
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
$\theta$	0°	8°	0°	8°

3-pin SOT23-3 Outline Dimensions



Symbol	Dimensions In Millimeters		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	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

3-pin SOT89 Outline Dimensions



Symbol	Dimensions In Millimeters		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

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [LDO Voltage Regulators](#) category:*

*Click to view products by [Siproin](#) manufacturer:*

Other Similar products are found below :

[M38D29FFHP#U1](#) [702103A](#) [717726C](#) [742457H](#) [MP20051DN-LF-Z](#) [R5F111PGGFB#30](#) [AP7363-SP-13](#) [NCP103AMX285TCG](#)  
[NCV8664CST33T3G](#) [NCV8752AMX28TCG](#) [L9454](#) [AP7362-HA-7](#) [LX13043CLD](#) [TCR3DF185,LM\(CT](#) [TCR3DF24,LM\(CT](#)  
[TCR3DF285,LM\(CT](#) [TCR3DF31,LM\(CT](#) [TCR3DF45,LM\(CT](#) [TLF4949EJ](#) [L9708](#) [L970813TR](#) [030014BB](#) [059985X](#) [EAN61387601](#)  
[EAN61573601](#) [NCP121AMX173TCG](#) [NCP4687DH15T1G](#) [NCV8703MX30TCG](#) [701326R](#) [702087BB](#) [755078E](#) [TCR2EN28,LF\(S](#)  
[LM1117DT-1.8/NO](#) [LT1086CM#TRPBF](#) [AZ1085S2-1.5TRE1](#) [MAX15101EWL+T](#) [NCV8170AXV250T2G](#) [SCD337BTG](#)  
[TCR3DF27,LM\(CT](#) [TCR3DF19,LM\(CT](#) [TCR3DF125,LM\(CT](#) [TCR2EN18,LF\(S](#) [MAX15103EWL+T](#) [TS2937CZ-5.0 C0](#) [MAX8878EUK30-](#)  
[T](#) [MAX663CPA](#) [NCV4269CPD50R2G](#) [NCV8716MT30TBG](#) [AZ1117IH-1.2TRG1](#) [MP2013GQ-P](#)