



Description

The GL6600 series is a low-dropout regulators rated for 600mA output current. Low power consumption and high accuracy is achieved through CMOS technology and internal trimmed reference voltage.

The GL6600 series consists of a high-precision voltage reference, error correction circuit, and a current limited output driver. The fast transient response is a cut standing feature for applications with various loads.

Features

- Typical 2% internally trimmed output
- Output current is excess of 600mA
- Low dropout voltage of 690mV typical at 600mA
- P-MOS output stage with low $R_{DS(ON)}$
- Short Circuit Protection
- Internal thermal overload protection
- Space Saving Package SOT-23-5 and SOT89

Application

Instrumentation

Portable Electronics

Wireless Devices

Cordless Phones

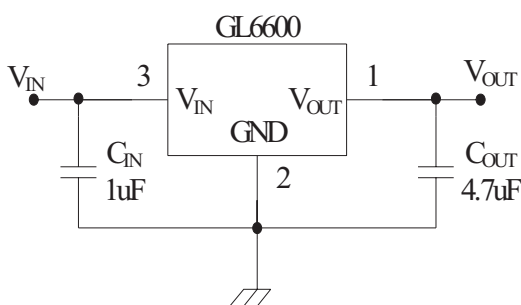
PC Peripherals

Battery Powered Widgets

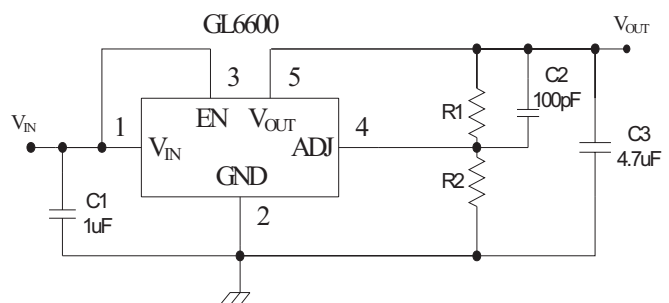
Electronic Scales

STANDARD CIRCUIT

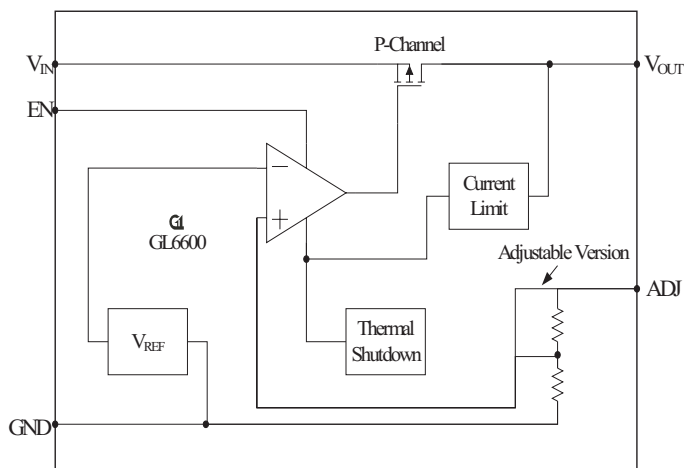
(Fixed Version)



(Adjustable Version)



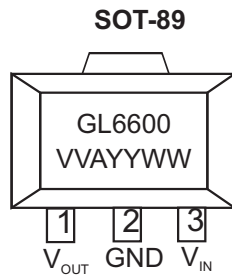
◆ BLOCK DIAGRAM



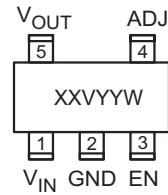


600mA LOW DROPOUT CMOS VOLTAGE REGULATOR

◆ MARKING INFORMATION & PIN CONFIGURATIONS (TOP VIEW)



VV = Voltage Suffix (18=1.8V, 50=5.0V)
A = Assembly Location
YY = Year
WW = Weekly

SOT-25 (SOT-23-5)

XX = Marking Code(JA = GL6600)
V = Voltage Code
YY = Year
W = Weekly

◆ ORDERING INFORMATION

Ordering Number	Output Voltage	Voltage Code	Package	Shipping
GL6600-AST25R	ADJ	A	SOT-25	3,000 Units/ Tape & Reel
GL6600-1.5ST89R	1.5		SOT-89	1,000 Units/ Tape & Reel
GL6600-1.5ST25R	1.5	C	SOT-25	3,000 Units/ Tape & Reel
GL6600-1.8ST89R	1.8		SOT-89	1,000 Units/ Tape & Reel
GL6600-1.8ST25R	1.8	E	SOT-25	3,000 Units/ Tape & Reel
GL6600-2.0ST89R	2.0		SOT-89	1,000 Units/ Tape & Reel
GL6600-2.0ST25R	2.0	F	SOT-25	3,000 Units/ Tape & Reel
GL6600-2.5ST89R	2.5		SOT-89	1,000 Units/ Tape & Reel
GL6600-2.5ST25R	2.5	G	SOT-25	3,000 Units/ Tape & Reel
GL6600-2.7ST89R	2.7		SOT-89	1,000 Units/ Tape & Reel
GL6600-2.7ST25R	2.7	T	SOT-25	3,000 Units/ Tape & Reel
GL6600-2.8ST89R	2.8		SOT-89	1,000 Units/ Tape & Reel
GL6600-2.8ST25R	2.8	H	SOT-25	3,000 Units/ Tape & Reel
GL6600-3.0ST89R	3.0		SOT-89	1,000 Units/ Tape & Reel
GL6600-3.0ST25R	3.0	J	SOT-25	3,000 Units/ Tape & Reel
GL6600-3.3ST89R	3.3		SOT-89	1,000 Units/ Tape & Reel
GL6600-3.3ST25R	3.3	K	SOT-25	3,000 Units/ Tape & Reel
GL6600-5.0ST89R	5.0		SOT-89	1,000 Units/ Tape & Reel
GL6600-5.0ST25R	5.0	Q	SOT-25	3,000 Units/ Tape & Reel
GL6600-5.2ST89R	5.2		SOT-89	1,000 Units/ Tape & Reel
GL6600-5.2ST25R	5.2	R	SOT-25	3,000 Units/ Tape & Reel

* For detail ordering number identification, please see last page.

◆ PIN DESCRIPTION

Pin Name		Pin Name	Function
SOT-25	SOT-89		
1	3	V_{IN}	Supply Voltage Input
2	2	GND	Ground
3	X	EN	The Enable pin normally floats high.
4	X	ADJ	Adjustment input:Feedback input. Connect to resistive valtage-divider network
5	1	V_{OUT}	Regulated Voltage Output



◆ ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNITS
Input Voltage Range		V_{IN}	8.0	V
Output Voltage Range			(1.3/5.2) with step 0.1V; ADJ	V
Continuous Total Power Dissipation	SOT-89	P_D	500	mW
	SOT-25		250	
Maximum Operating Junction Temperature		T_J	+150	°C
Storage Temperature Range		T_{STG}	-65 ~ +150	°C
Operation Temperature Range			-40 ~ +85	°C
Lead Temperature (Soldering: 10 seconds)			260	°C

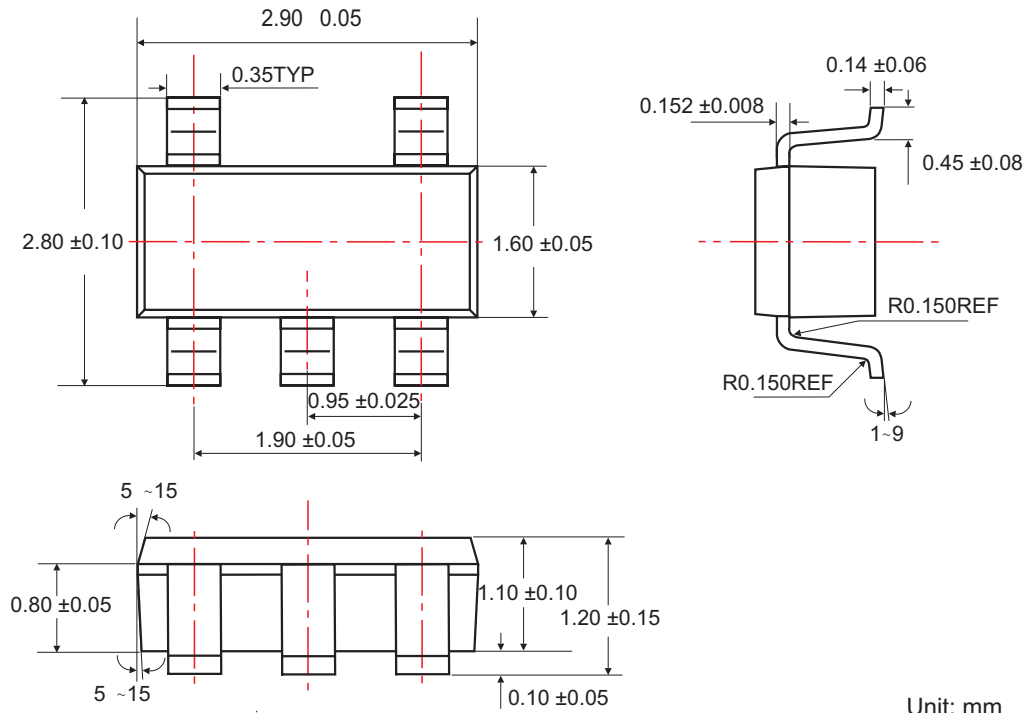
◆ ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$, $V_{IN(min)} = V_{OUT} + V_{DROPOUT}$, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Inout Voltage Range	V_{IN}		Note 1		7.0	V
Output Voltage Accuracy	V_{OUT}	$T_A = 25^\circ\text{C}, I_{OUT} = 1\text{mA}$ $T_A = 0 \sim 85^\circ\text{C}, 10\text{mA} < I_{OUT} < 600\text{mA}$	-1.5 -2.0		+1.5 +2.0	%
Maximum Output Current	$I_{OUT(max)}$		-	-	600	mA
Load Regulation	ΔV_{OL}	$10\text{mA} \leq I_{OUT} \leq 600\text{mA}$	-	-	30	mV
Line Regulation	ΔV_{OI}	$(V_{OUT} + 0.15\text{V}) < V_{IN} < 7.0\text{V}$, $I_{OUT} = 1\text{mA}$	-	-	10	mV
Dropout Voltage for $1.3\text{V} \leq V_{out} \leq 2.0\text{V}$ for $2.0\text{V} < V_{out} \leq 2.8\text{V}$ for $V_{out} > 2.8\text{V}$	$V_{DROPOUT}$	$I_{OUT} = 600\text{mA}$	-	-	1500	mV
	$V_{DROPOUT}$	$I_{OUT} = 600\text{mA}$	-	-	860	mV
	$V_{DROPOUT}$	$I_{OUT} = 600\text{mA}$	-	-	690	mV
Current Limit	I_{CL}	$V_{IN} = V_{OUT} + 0.6\text{V}$	900	-	-	mA
Quiescent Current	I_Q	$I_O = 0\text{mA}$	-	50	70	uA
Ground Pin Current	I_{GND}	$10\text{mA} < I_{OUT} < 600\text{mA}$	-	50	70	uA
Thermal Shutdown Temp.			-	160	-	°C
Thermal Shutdown Hyster			-	30	-	°C
PSRR		1KHz, $C_{OUT} = 4.7\mu\text{F}$	-	50	-	dB
EN High (min). ACTIVE	V_{EH}	$I_O = 10\text{mA}$	1.6	-	-	V
EN Low (max)	V_{EL}	$I_O = 10\text{mA}$	-	-	0.4	V
Shutdown Supply Current		$V_{OUT} = 0\text{V}$	-	-	1.0	uA
EN Input Current (Hifh)	I_{EH}	$V_{EN} = V_{IN}, V_{IN} = 2.5 \sim 7.0\text{V}$	-	-	0.1	uA
EN Input Current (Low)	I_{EL}	$V_{EN} = 0\text{V}, V_{IN} = 2.5 \sim 7.0\text{V}$	-	-	0.5	uA

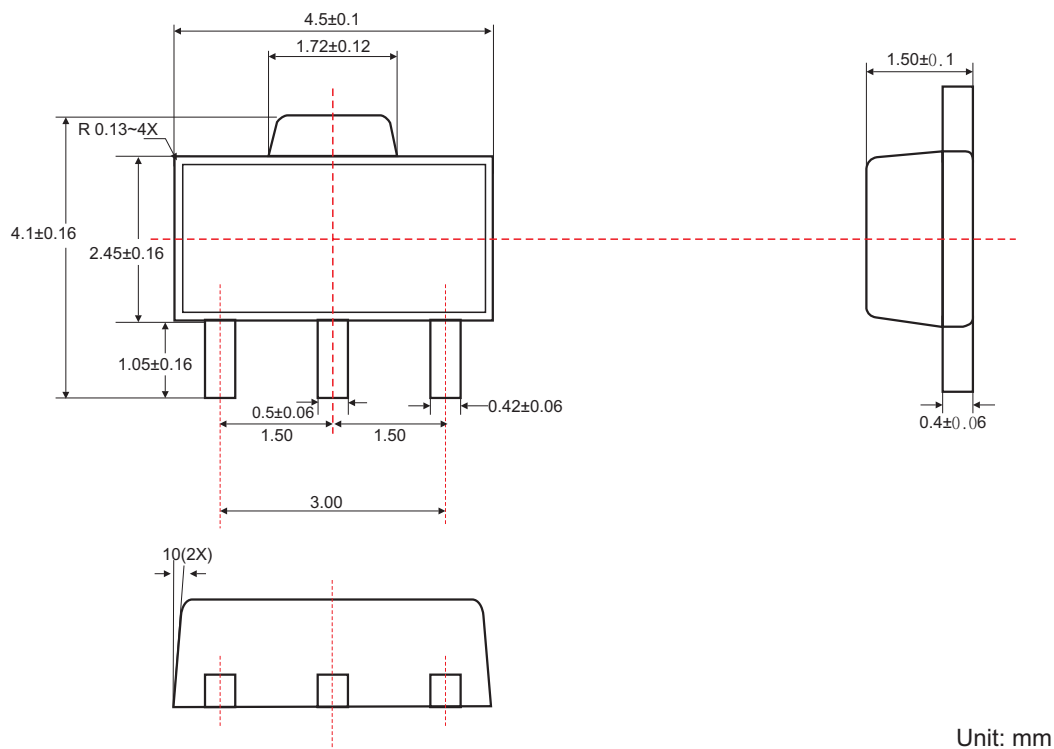
Note:

1. $V_{IN(MIN)} = V_{OUT} + V_{DROPOUT}$

◆ SOT-25(SOT-23-5) PACKAGE OUTLINE DIMENSIONS



◆ SOT-89 PACKAGE OUTLINE DIMENSIONS





◆ ORDERING NUMBER

