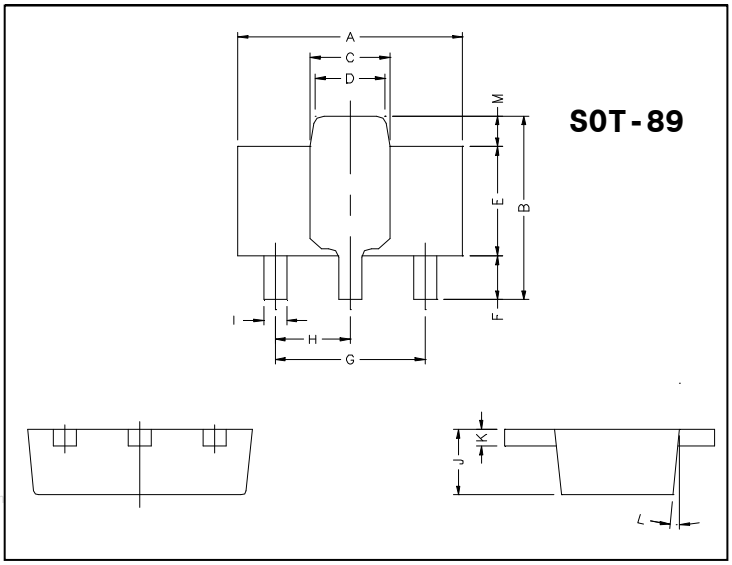
GM78L12 3-TERMINAL POSITIVE VOLTAGE REGULATOR

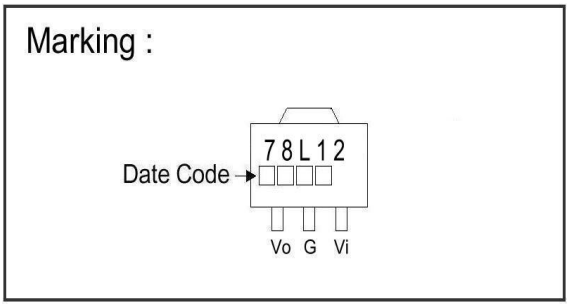
Description

The GM78L12 series of surface mount device regulators are easy-to-use devices suitable for multitude of applications that require a regulated supply of up to 100mA. These regulators feature internal current limiting and thermal shutdown making them remarkably rugged. No external components are required with the GM78L12 devices in many applications.
These devices offer a substantial performance advantage over the traditional zener diode resistor combination, as output impedance and quiescent current are substantially reduced.

- Wide Range Of Available, Fixed Output Voltages
- Internal Short-Circuit Current Limiting
- Internal Thermal Overload Protection
- No External Components Required

Package Dimensions





REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.4	4.6	G	3.00 REF.	
B	4.05	4.25	H	1.50 REF.	
C	1.50	1.70	I	0.40	0.52
D	1.30	1.50	J	1.40	1.60
E	2.40	2.60	K	0.35	0.41
F	0.89	1.20	L	5° TYP.	
			M	0.70 REF.	

Absolute Maximum Ratings

Parameter	Ratings	Unit
Input Voltage	35	V
Operating Junction Temperature Range	-20 ~ +150	℃
Storage Temperature Range	-55 ~ +150	℃
Output Current	100	mA
Total Power Dissipation	350	mW

Characteristics at Ta = 25℃

(Vi=19V, Io=40mA, Tj=25℃, Cin=0.33uF, Cout=0.1uF unless otherwise specified) (Note1)

Rank A (3%)				Unit	Test Conditions
Symbol	Min.	Typ.	Max.		
VO	11.64	12	12.36	V	Io=1mA - 40mA, Vin= 14.5V ~ 27V
	11.64	12	12.36		Io =1mA - 70mA ,Vi = 14.5V ~ VMAX (Note2)
ΔVO (Line Regulation)	-	25	300	mV	Vin =14.5V - 27V
	-	20	250		Vin =16V - 27V
ΔVO (Load Regulation)	-	25	150	mV	Io = 1mA -100mA
	-	12	75		Io = 1mA - 40mA
IQ	-	2.0	6.0	mA	Vin =19V, Io=0mA, Tj=25℃
Δ IQ	-	-	1.5	mA	Vin = 16V - 27V
	-	-	0.1		Io = 1mA - 40mA
Vn	-	80	-	uV	F=10Hz – 100kHz
ΔVo / ΔTt	-	-1.0	-	mV/℃	Io=5mA
RR	37	65		dB	Vin =15V ~ 25V, f=120Hz
VD	-	1.7	-	V	Tj=25℃

Characteristics at Ta = 25℃ (Vi=19V, Io=40mA, Tj=25℃, Cin=0.33uF, Cout=0.1uF unless otherwise specified) (Note1)

RankB (5%)				Unit	Test Conditions
Symbol	Min.	Typ.	Max.		
VO	11.4	12	12.6	V	Io=1mA - 40mA, Vin= 14.5V ~ 27V
	11.4	12	12.6		Io =1mA - 70mA ,Vi = 14.5V~ VMAX (Note2)
ΔVO (Line Regulation)	-	25	300	mV	Vin =14.5V - 27V
	-	20	250		Vin =16V - 27V
ΔVO (Load Regulation)	-	25	150	mV	Io = 1mA -100mA
	-	12	75		Io = 1mA - 40mA
IQ	-	2.0	6.0	mA	Vin =19V, Io=0mA, Tj=25℃
Δ IQ	-	-	1.5	mA	Vin = 16V - 27V
	-	-	0.1		Io = 1mA - 40mA
Vn	-	80	-	uV	F=10Hz – 100kHz
ΔVo / ΔTt	-	-1.0	-	mV/℃	Io=5mA
RR	37	65		dB	Vin =15V - 25V, f=120Hz
VD	-	1.7	-	V	Tj=25℃

Note1: The Maximum steady state usable output current is dependent on input voltage, heat sinking, lead length of the package and copper of PCB .The data above represent pulse test conditions with junction temperatures specified at the initiation of test.
Note2: Power dissipation<0.5W

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