

L78MG

Variable 4-Pin Voltage Regulator

Applications

• General-purpose voltage regulator.

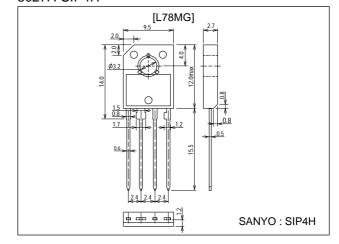
Features

- Wide operating voltage range: 7.5 to 35V
- 500mA output.
- On-chip thermal protector.
- On-chip overcurrent limiter.
- On-chip ASO protector.
- 4-pin SIP package facilitating mounting and thermal design as in case of transistor.
- Minimum number of external parts required.
- Easy to vary voltage.

Package Dimensions

unit:mm

3027A-SIP4H



Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum Supply Voltage	V _{CC} max	Pin 1	35	V
Allowable Power Dissipation	Pd max		1.2	W
Operating Temperature	Topr		-20 to +80	°C
Storage Temperature	Tstg		-40 to +150	°C

Recommended Operating Conditions at $Ta = 25^{\circ}C$

Parameter	Symbol	Conditions	Ratings	Unit
Input Voltage	V _{IN}		V _{OUT} +3 to V _{OUT} +15	V
Output Current	IOUT		500 or less	mA

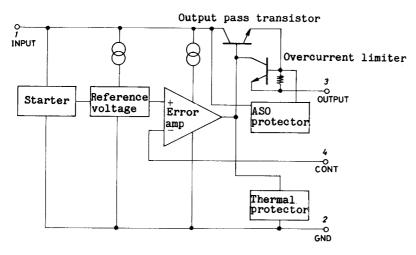
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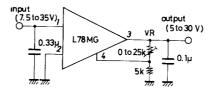
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Input Voltage	V _{IN}	Tj=25°C	7.5		35	V
Output Voltage	Vout	V _{IN} =V _{OUT} +5	5.0		30	V
Line Regulation (Referenced to output voltage)	ΔV _o LINE	Tj=25°C, I _{OUT} =200mA, V _{OUT} ≤10V (V _{OUT} +2.5V)≤VI _N ≤(V _{OUT} +20V) Tj=25°C, I _{OUT} =200mA, V _{OUT} ≥10V		0.2	1.0	%
		$(V_{OUT}+3V) \leq V_{IN} \leq (V_{OUT}+15V)$		0.15	0.75	%
		$(V_{OUT}+3V) \leq V_{IN} \leq (V_{OUT}+7V)$		0.1	0.67	%
Load Regulation (Referenced to output voltage)	ΔV_0 LOAD	Tj=25°C, 5mA≤l _{OUT} =500mA, V _{IN} =V _{OUT} +7V		0.2	1.0	%
Control Pin Current		Tj=25°C		1.0	5.0	μΑ
Current Dissipation	Icc	Tj=25°C		2.8	5.0	mA
Ripple Rejection	Rrej	8V≤VIN=18V, VOUT=5V, f=120Hz, IOUT=300mA, Tj=25°C	62	80		dB
		8V≤V _{IN} =18V, V _{OUT} =5V, f=120Hz, I _{OUT} =100mA	62			dB
Output Noise Voltage	V _{NO}	10Hz≤f≤100kHz, V _{OUT} =5V		8	40	μV
Minimum Input-Output Voltage Drop	VDROP			2	2.5	V
Short Circuit Current	los	V _{IN} =35V, Tj=25°C		100	600	mA
Peak Output Current	I _{OP}	Tj=25°C	0.4	0.8	1.4	Α
Reference Voltage		Tj=25°C	4.8	5.0	5.2	V

Equivalent Circuit

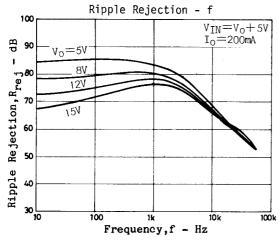


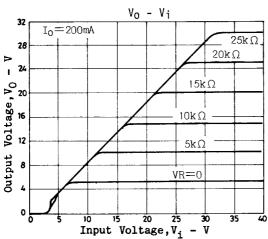
Sample Application Circuit

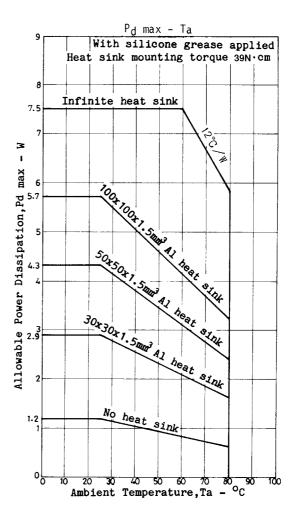


Unit (resistance: Ω , capacitance: F)

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