GM78L05 3-TERMINAL POSITIVE VOLTAGE REGULATOR

Description

The GM78L05 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 GM78L05 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.

Features

- Internal Short-Circuit Current Limiting
- Internal Thermal Overload Protection
- No External Components Required

Package Dimensions



Absolute Maximum Ratings

Parameter	Ratings	Unit
Input Voltage	30	V
Operating Junction Temperature Range	-20 ~ +150	°C
Output Current	100	mA
Storage Temperature Range	-55 ~ +150	°C
Power Dissipation	350	mW

Characteristics at **Ta = 25°**C (Vi=10V, lo=40mA, Tj=25°C, Ci=0.33uF, Co=0.1uF unless otherwise specified) (Note1)

Symbol		Min.	Тур.	Max.	Unit	Test Conditions	
VO	S-Rank (1%)	4.95	5	5.05	V	lo =40mA, Vin=10V, Tj=25℃	
	A-Rank (3%)	4.85	5	5.15		lo =1mA - 40mA, 7V ≤ Vin≤ 20V lo =1mA - 70mA, 7V ≤ Vin≤ Vmax (Note2)	
	B-Rank (5%)	4.75	5	5.25			
∆VO (Line Regulation)		-	18	75	mV	$7V \le Vin \le 20V$	
		-	10	54		8V≤ Vin ≤ 20V	
∆VO (Load Regulation)		-	20	60	mV	lo=1mA - 100mA	
		-	5.0	30		lo=1mA - 40mA	
	IQ	-	3.0	5.0	mA	Tj=25℃, Vin=10V,Io=0mA	
ΔIQ		-	-	1.0	mA	$8V \le Vin \le 20V$	
		-	-	0.1		1mA ≤ lo ≤ 40mA	
	Vn	-	40	-	uV	10Hz ≤ f ≤100KHz	
	RR	47	62	-	dB	8V ≤ Vin ≤ 20, f=120Hz, Tj=25℃	
ΔV	ο / ΔΤ	-	-0.65	-	mV/℃	Tj= 0°C∼ +125°C ,Io= 5mA	
	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

Characteristics Curve



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