

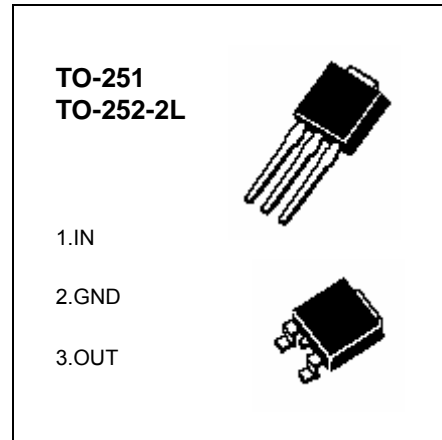


SHENZHEN TUOFENG SEMICONDUCTOR TECHNOLOGY CO. LTD  
**TO-251/TO-252-2L Plastic-Encapsulate Transistors**

**LM78M05** Three-terminal positive voltage regulator

**FEATURES**

- Maximum Output current  
 $I_{OM}: 0.5\text{ A}$
- Output voltage  
 $V_O: 5\text{ V}$
- Continuous total dissipation  
 $P_D: 1.25\text{ W}$



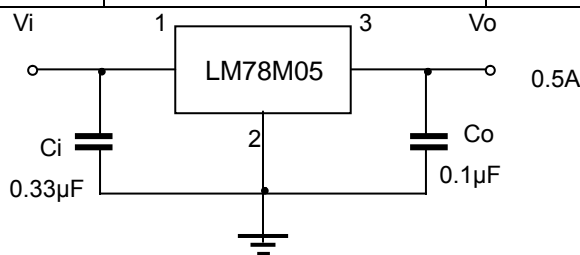
**ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)**

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	25	V
Operating Junction Temperature Range	$T_{OPR}$	0-+125	°C
Storage Temperature Range	$T_{STG}$	-65-+150	°C

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ( $V_i=10\text{V}, I_o=350\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$25^\circ\text{C}$	4.8	5	5.2	V
		$7\text{V} \leq V_i \leq 20\text{V}, I_o=5\text{mA}-350\text{mA}$ $P_o \leq 15\text{W}$	0-125°C	4.75	5	5.25
Load Regulation	$\Delta V_o$	$I_o=5\text{mA}-0.5\text{A}$	25°C	15	100	mV
		$I_o=5\text{mA}-200\text{mA}$	25°C	5	50	mV
Line regulation	$\Delta V_o$	$7\text{V} \leq V_i \leq 25\text{V}, I_o=200\text{mA}$	25°C	3	100	mV
		$8\text{V} \leq V_i \leq 25\text{V}, I_o=200\text{mA}$	25°C	1	50	mV
Quiescent Current	$I_q$	25°C	4.2	6	mA	
Quiescent Current Change	$\Delta I_q$	$8\text{V} \leq V_i \leq 25\text{V}, I_o=200\text{mA}$	0-125°C		0.8	mA
		$5\text{mA} \leq I_o \leq 350\text{mA}$	0-125°C		0.5	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$	25°C	40	200	uV
Ripple Rejection	RR	$8\text{V} \leq V_i \leq 18\text{V}, f=120\text{Hz}, I_o=300\text{mA}$	0-125°C	62	80	dB
Dropout Voltage	$V_d$	$I_o=350\text{mA}$	25°C	2	2.5	V
Short Circuit Current	$I_{sc}$	$V_i=10\text{V}$	25°C	300		mA
Peak Current	$I_{pk}$	25°C		0.5		A

**TYPICAL APPLICATION**





## Typical Characteristics

