



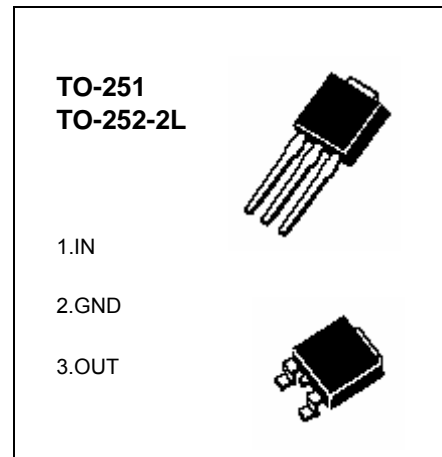
TIGER ELECTRONIC CO.,LTD

TO-251 Plastic-Encapsulate Transistors

LM78M05P Three-terminal positive voltage regulator

FEATURES

- Output Current up to 500mA
- Internal thermal overload protection
- High power dissipation capability
- Internal short-circuit current limiting



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

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Output voltage	V_o	5	V
Maximum Output current	I_{OM}	0.5	A
Power dissipation	P_D	1.25	W
Operating Junction Temperature Range	T_{OPR}	0-+125	°C
Storage Temperature Range	T_{STG}	-65-+150	°C

ELECTRICAL CHARACTERISTICS ($V_i=10V, I_o=350mA, 0^\circ C < T_j < 125^\circ C, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25^\circ C$	4.8	5	5.2	V
		$7 \leq V_i \leq 20V, I_o=5mA-350mA$ $P_o \leq 15W$	4.75	5	5.25	V
Load Regulation	ΔV_o	$T_j=25^\circ C, I_o=5mA-0.5A$		15	100	mV
		$T_j=25^\circ C, I_o=5mA-200mA$		5	50	mV
Line regulation	ΔV_o	$7 \leq V_i \leq 25V, I_o=200mA$		3	100	mV
		$8 \leq V_i \leq 25V, I_o=200mA$		1	50	mV
Quiescent Current	I_q	$T_j=25^\circ C$		4.2	6	mA
Quiescent Current Change	ΔI_q	$8V \leq V_i \leq 25V, I_o=200mA$			0.8	mA
	ΔI_q	$5mA \leq I_o \leq 350mA$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$		40	200	uV
Ripple Rejection	RR	$8V \leq V_i \leq 18V, f=120Hz, I_o=300mA$ $T_j=25^\circ C$	62	80		dB
Dropout Voltage	V_d	$T_j=25^\circ C, I_o=350mA$		2	2.5	V
Short Circuit Current	I_{sc}	$V_i=10V, T_a=25^\circ C$		300		mA
Peak Current	I_{pk}	$T_j=25^\circ C$		0.7		A

TYPICAL APPLICATION

