

**78M05****Three-terminal positive voltage regulator****FEATURES**

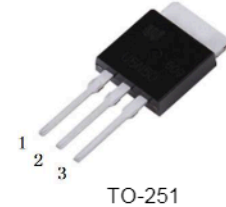
Maximum output current

 I_{OM} : 0.5 A

Output voltage

 V_O : 5V

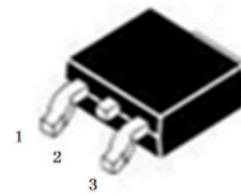
Continuous total dissipation

 P_D : 1.25 W

TO-251

MECHANICAL DATA

- Case: Molded plastic
- Polarity: As marked
- Mounting Position: Any
- Molded Plastic: UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275°C maximum, 10s per JESD 22-B106



TO-252

1.IN**2.GND****3.OUT**

Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

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

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics At Specified Virtual Junction Temperature $(V_i=10V, I_O=350mA, C_i=0.33\mu F, C_o=0.1\mu F, \text{ unless otherwise specified})$

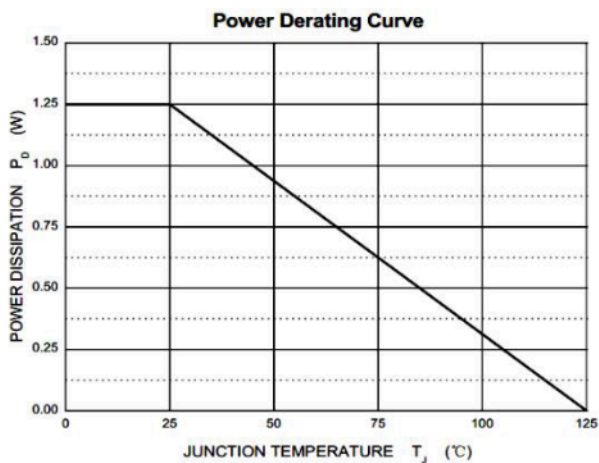
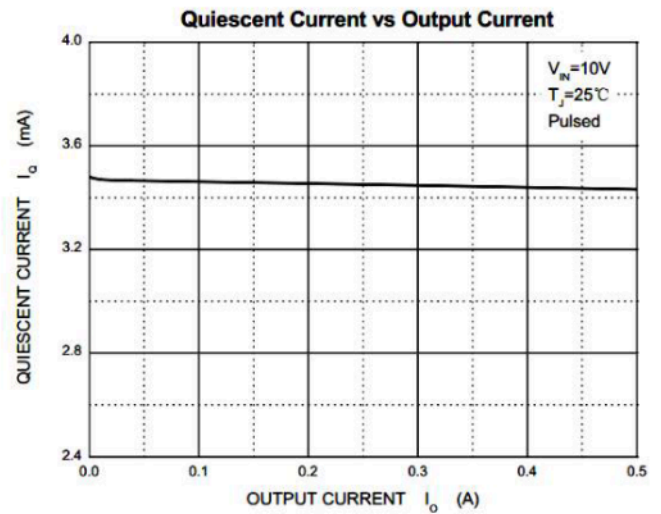
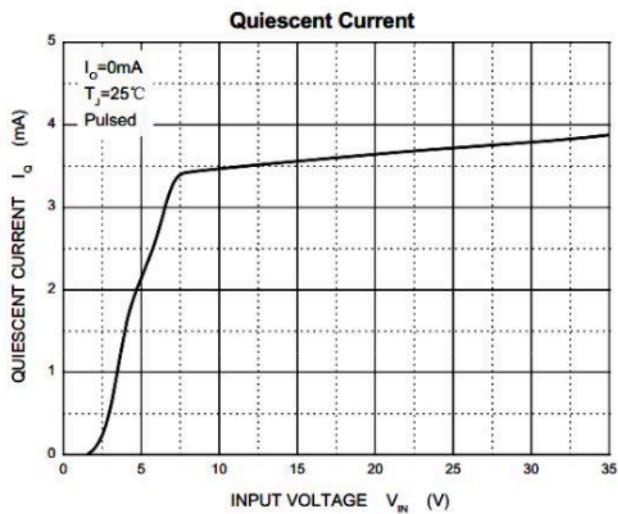
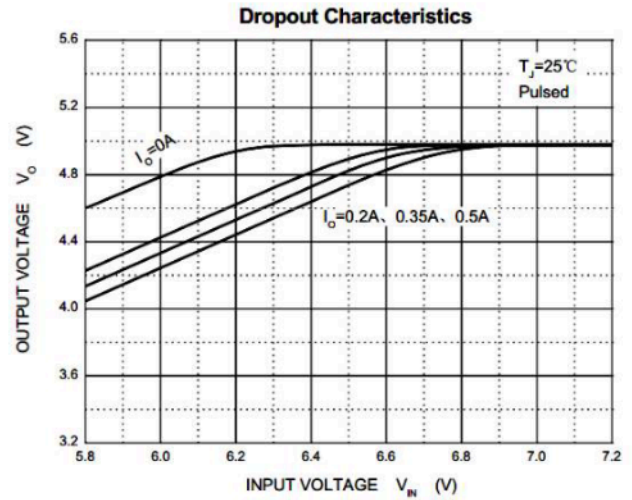
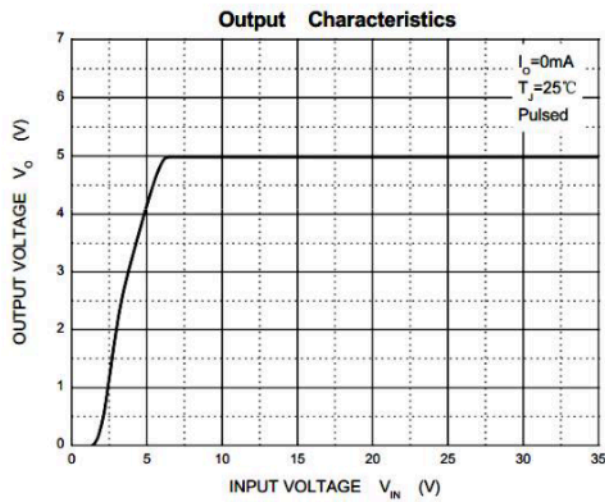
Symbol	Parameter	Test Conditions		Min	Typ	Max	Unit
V_O	Output Voltage		25°C	4.8	5	5.2	V
		$7V \leq V_i \leq 20V, I_O=5mA-350mA$ $P_O \leq 15W$	0-125°C	4.75	5	5.25	V
ΔV_O	Load Regulation	$I_O=5mA-0.5A$	25°C		15	100	mV
		$I_O=5mA-200mA$	25°C		5	50	mV
ΔV_O	Line Regulation	$7V \leq V_i \leq 25V, I_O=200mA$	25°C		3	100	mV
		$8V \leq V_i \leq 25V, I_O=200mA$	25°C		1	50	mV
I_q	Quiescent Current		25°C		4.2	6	mA
ΔI_q	Quiescent Current Change	$8V \leq V_i \leq 25V, I_O=200mA$	0-125°C			0.8	mA
ΔI_q		$5mA \leq I_O \leq 350mA$	0-125°C			0.5	mA
V_N	Output Noise Voltage	$10Hz \leq f \leq 100KHz$	25°C		40	200	μV
RR	Ripple Rejection	$8V \leq V_i \leq 18V, f=120Hz, I_O=300mA$	0-125°C	62	80		dB
V_d	Dropout Voltage	$I_O=350mA$	25°C		2	2.5	V
I_{sc}	Short Circuit Current	$V_i=10V$	25°C		300		mA
I_{pk}	Peak Current		25°C		0.5		A



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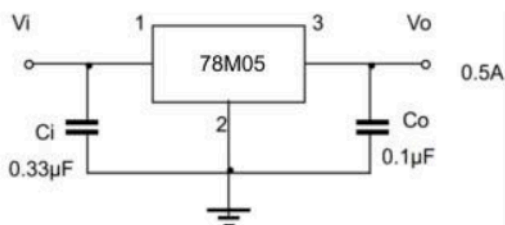
Three-terminal positive voltage regulator

Typical Characteristics



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Typical Application



Package Outline Dimensions millimeters

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	Dim.	Min.	Max.
	A	2.1	2.5
	B	1.3	1.7
	C	0.4	0.6
	D	6.4	6.7
	D1	5.1	5.5
	E	5.5	6.0
	E1	Typ2.3	
	E2	Typ4.6	
	B1	0.6	0.8
	B2	0.75	0.95
	B3	0.35	0.45
	L1	9.0	10.0
	L2	1.4	1.6
	L3	0.75	0.95
All Dimensions in millimeter			

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	Dim.	Min.	Max.
	A	2.2	2.4
	A2	0.95	1.15
	A3	0.45	0.65
	b	0.65	0.85
	c	0.45	0.55
	D	6.45	6.75
	D2	5.2	5.4
	E	5.8	6.0
	E2	0.95	1.25
	e	Typ 2.3	
	e1	Typ 4.6	
	L	5.5	5.7
	L1	1.2	1.5
All Dimensions in millimeter			