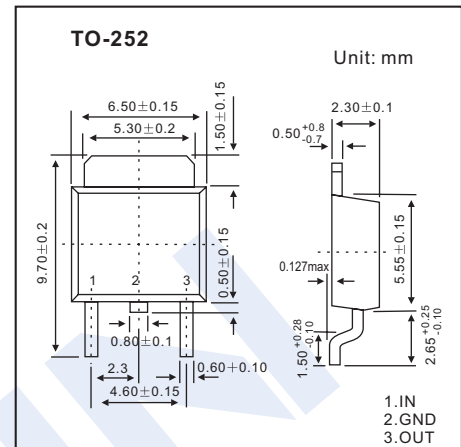


Three-Terminal Positive Voltage Regulator

LM78M05

■ Features

- Maximum Output current I_{OM} : 0.5A
- Output Voltage V_O : 5V
- Continuous Total Dissipation P_D : 1.25W



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

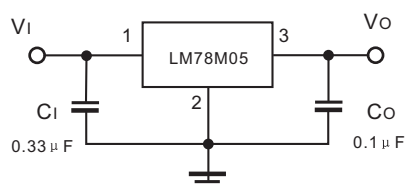
Parameter	Symbol	Rating	Unit
Input Voltage	V_I	35	V
Operating Junction Temperature Range	T_{OPR}	-55 ~ +125	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

■ Electrical Characteristics ($V_I=10V$, $I_O=350mA$, $C_I=0.33 \mu F$, $C_O=0.1 \mu F$, unless otherwise specified)

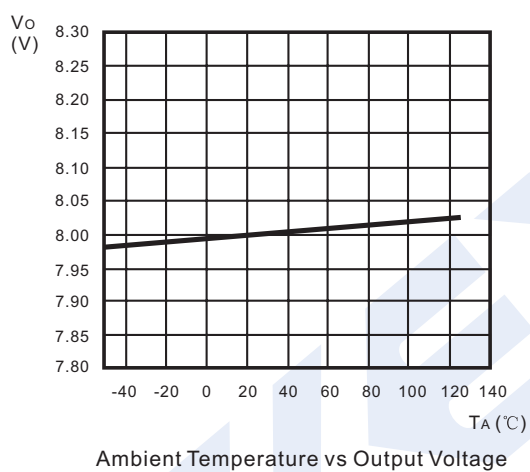
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_O	$T_J = 25^\circ C$	4.8	5.0	5.2	V
		$T_J = 0 \sim 125^\circ C$, $7V \leq V_I \leq 20V$, $I_O = 5mA \sim 350mA$, $P_O \leq 15W$	4.75	5.0	5.25	V
Load Regulation	ΔV_O	$T_J = 25^\circ C$, $I_O = 5mA \sim 0.5A$		15	100	mV
		$T_J = 25^\circ C$, $I_O = 5mA \sim 200mA$		5	50	mV
Line Regulation	ΔV_O	$T_J = 25^\circ C$, $7V \leq V_I \leq 25V$, $I_O = 200mA$		3	100	mV
		$T_J = 25^\circ C$, $8V \leq V_I \leq 25V$, $I_O = 200mA$		1	50	mV
Quiescent Current	I_Q	$T_J = 25^\circ C$		4.2	6	mA
Quiescent current Change	ΔI_Q	$T_J = 0 \sim 125^\circ C$, $8V \leq V_I \leq 25V$, $I_O = 200mA$			0.8	mA
		$T_J = 0 \sim 125^\circ C$, $5mA \leq I_O \leq 350mA$			0.5	mA
Output Noise Voltage	V_N	$T_J = 25^\circ C$, $10Hz \leq f \leq 100kHz$		40	200	μV
Ripple Rejection	RR	$T_J = 0 \sim 125^\circ C$, $8V \leq V_I \leq 18V$, $f = 120Hz$, $I_O = 300mA$	62	80		dB
Dropout Voltage	V_D	$T_J = 25^\circ C$, $I_O = 350mA$		2	2.5	V
Short Circuit Current	I_{SC}	$T_J = 25^\circ C$, $V_I = 10V$		300		mA
Peak Current	I_{PK}	$T_J = 25^\circ C$		0.7		A

LM78M05

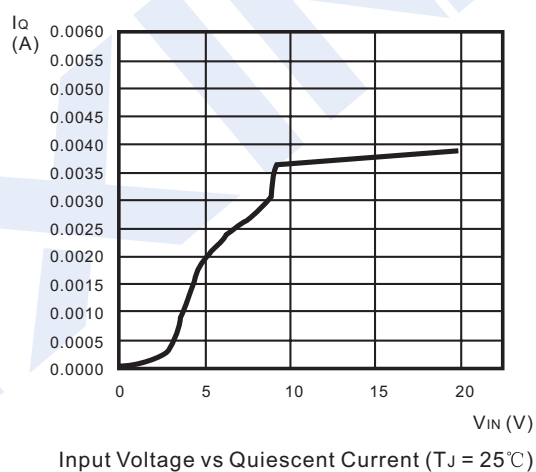
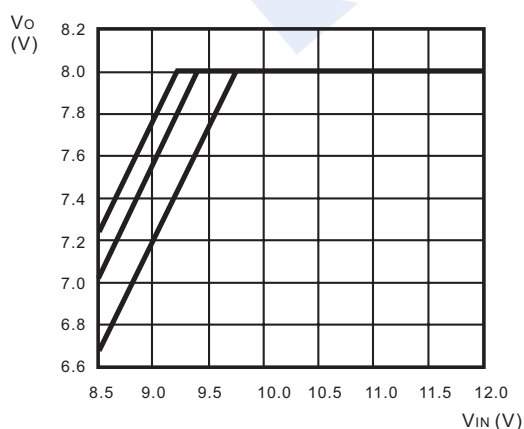
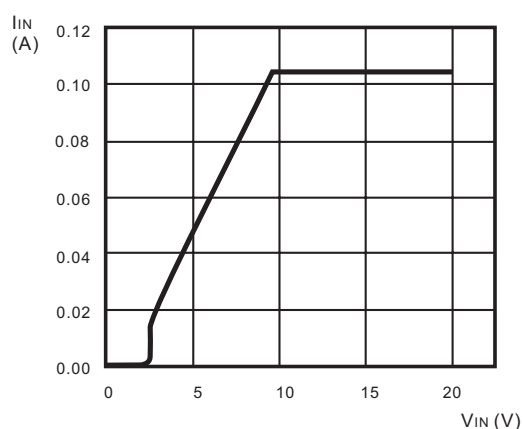
■ Typical Application



■ Typical Characteristics



Ambient Temperature vs Output Voltage

Input Voltage vs Quiescent Current ($T_J = 25^\circ\text{C}$)Input Voltage vs Output Voltage ($T_J = 25^\circ\text{C}$)Input Voltage vs Input Current ($T_J = 25^\circ\text{C}$)