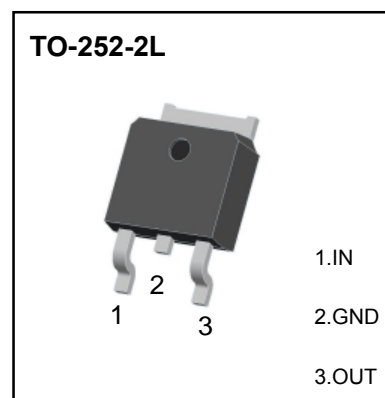


## TO-252-2L Plastic-Encapsulate Voltage Regulators

Three-terminal positive voltage regulator

### Feature

- Maximum output current  
 $I_{OM}$ : 0.5 A
- Output voltage  
 $V_O$ : 5V
- Continuous total dissipation  
 $P_D$ : 1.25 W ( $T_a = 25^\circ\text{C}$ )



### Limiting Values (Absolute Maximum Rating)

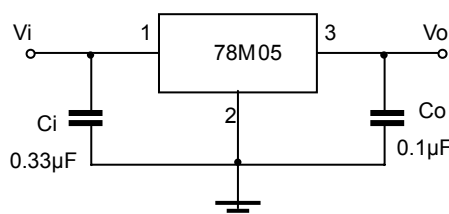
Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	80	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_{OPR}$	-25~+125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65~+150	$^\circ\text{C}$

### Electrical Characteristics ( $T=25^\circ\text{C}$ 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
		$7V \leq V_i \leq 20V, I_o = 5\text{mA} - 350\text{mA}$ $-25 \sim 125^\circ\text{C}$	4.75	5	5.25	V
Load Regulation	$\Delta V_o$	$I_o = 5\text{mA} - 0.5\text{A}$ $25^\circ\text{C}$		15	100	mV
		$I_o = 5\text{mA} - 200\text{mA}$ $25^\circ\text{C}$		5	50	mV
Line Regulation	$\Delta V_o$	$7V \leq V_i \leq 25V, I_o = 200\text{mA}$ $25^\circ\text{C}$		3	100	mV
		$8V \leq V_i \leq 25V, I_o = 200\text{mA}$ $25^\circ\text{C}$		1	50	mV
Quiescent Current	$I_q$	$25^\circ\text{C}$		4.2	6	mA
Quiescent Current Change	$\Delta I_q$	$8V \leq V_i \leq 25V, I_o = 200\text{mA}$ $-25 \sim 125^\circ\text{C}$			0.8	mA
		$5\text{mA} \leq I_o \leq 350\text{mA}$ $-25 \sim 125^\circ\text{C}$			0.5	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$ $25^\circ\text{C}$		40	200	$\mu\text{V}/V_o$
Ripple Rejection	RR	$8V \leq V_i \leq 18V, f = 120\text{Hz}, I_o = 300\text{mA}$ $-25 \sim 125^\circ\text{C}$	62	80		dB
Dropout Voltage	$V_d$	$I_o = 350\text{mA}$ $25^\circ\text{C}$		2	2.5	V
Short Circuit Current	$I_{sc}$	$V_i = 10V$ $25^\circ\text{C}$		300		mA
Peak Current	$I_{pk}$	$25^\circ\text{C}$		0.5		A

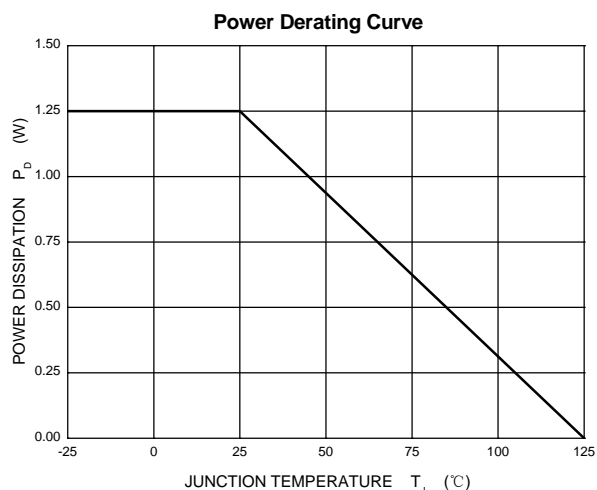
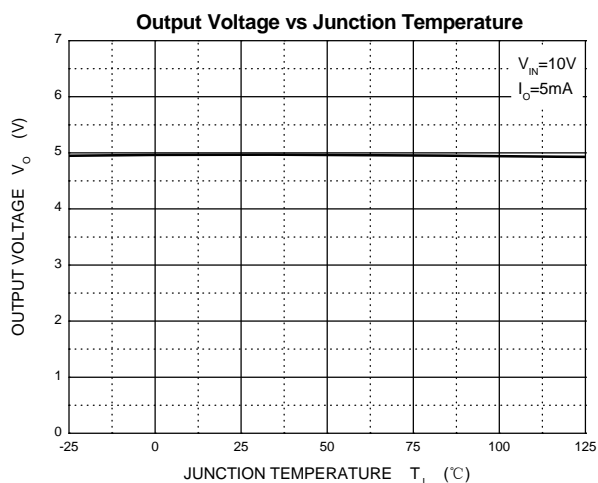
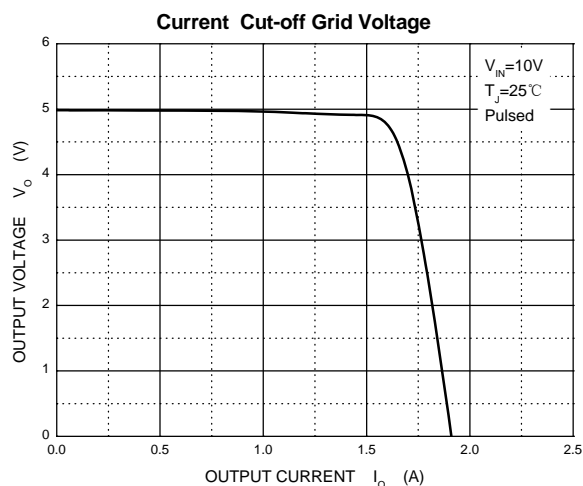
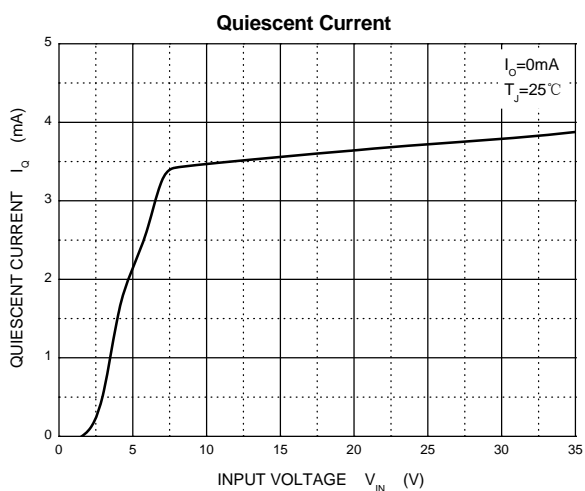
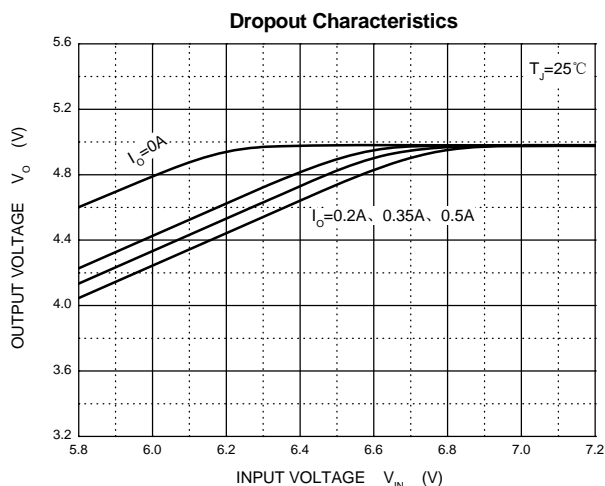
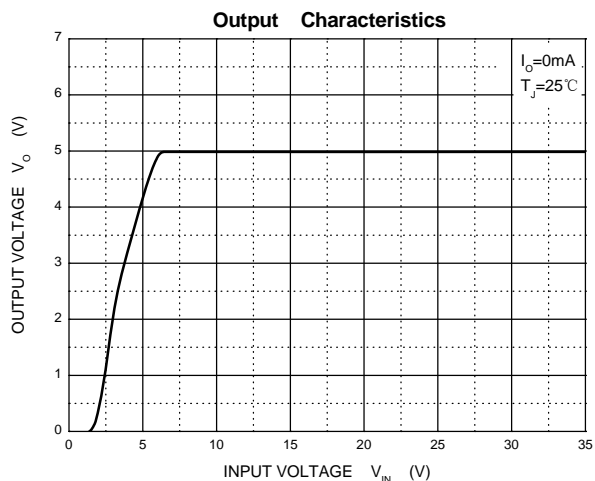
\* Pulse test.

### TYPICAL APPLICATION

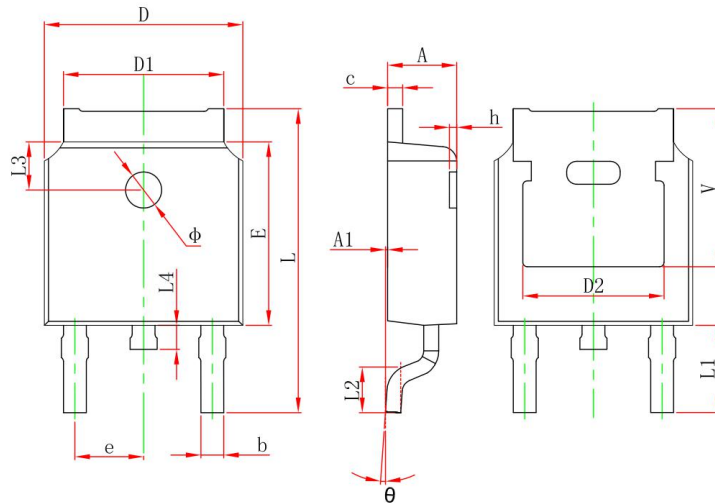


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

# Typical Characteristics



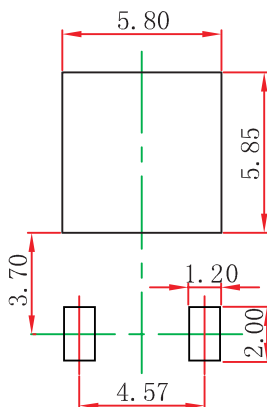
## TO-252-2L Package Outline Dimensions



SYMBOL	MIN	MAX	SYMBOL	MIN	MAX
A	2.20	2.40	L1	2.90 REF	
A1	0.000	0.125	L2	1.40	1.70
b	0.66	0.86	L3	1.60 REF	
c	0.46	0.58	L4	0.60	1.00
D	6.50	6.70	Φ	1.10	1.30
D1	5.10	5.46	θ	0°	8°
D2	4.830 REF		h	0.00	0.30
E	6.00	6.20	V	5.35 REF	
e	2.186	2.386			
L	9.80	10.40			
Coplanar degrees	0	0.09			

Unit : mm

## TO-252-2L Suggested Pad Layout



### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$ mm.
3. The pad layout is for reference purposes only.

### NOTICE

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