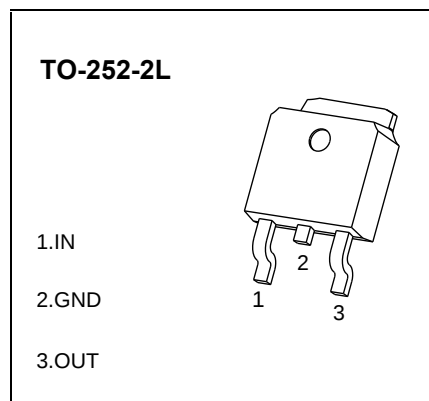


TO-252-2L Plastic-Encapsulate Voltage Regulators

Three-terminal positive voltage regulator

FEATURES

- Maximum output current
 I_{OM} : 0.5 A
- Output voltage
 V_O : 9V
- Continuous total dissipation
 P_D : 1.25 W ($T_a = 25^\circ\text{C}$)



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

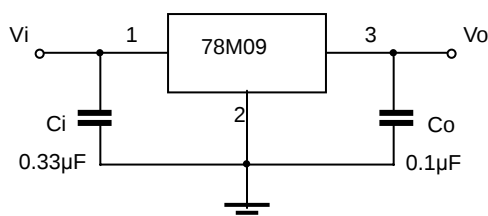
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	80	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-40~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=16\text{V}$, $I_o=350\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_J=25^\circ\text{C}$	8.73	9	9.27	V
		$11.5\text{V} \leq V_i \leq 24\text{V}$, $I_o=5\text{mA}-350\text{mA}$	8.55	9	9.45	V
Load Regulation	ΔV_o	$I_o=5\text{mA}-500\text{mA}$, $T_J=25^\circ\text{C}$		20	180	mV
		$I_o=5\text{mA}-200\text{mA}$, $T_J=25^\circ\text{C}$		10	90	mV
Line Regulation	ΔV_o	$11.5\text{V} \leq V_i \leq 26\text{V}$, $I_o=200\text{mA}$, $T_J=25^\circ\text{C}$		6	100	mV
		$12\text{V} \leq V_i \leq 26\text{V}$, $I_o=200\text{mA}$, $T_J=25^\circ\text{C}$		2	50	mV
Quiescent Current	I_q	$T_J=25^\circ\text{C}$		4.6	6	mA
Quiescent Current Change	ΔI_q	$11.5\text{V} \leq V_i \leq 26\text{V}$, $I_o=200\text{mA}$			0.8	mA
	ΔI_q	$5\text{mA} \leq I_o \leq 350\text{mA}$			0.5	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$, $T_J=25^\circ\text{C}$		60		$\mu\text{V}/V_o$
Ripple Rejection	RR	$13\text{V} \leq V_i \leq 23\text{V}$, $f=120\text{Hz}$, $I_o=300\text{mA}$	56	80		dB
Dropout Voltage	V_d	$I_o=350\text{mA}$, $T_J=25^\circ\text{C}$		2		V
Short Circuit Current	I_{sc}	$V_i=16\text{V}$, $T_J=25^\circ\text{C}$		250		mA
Peak Current	I_{pk}	$T_J=25^\circ\text{C}$		0.5		A

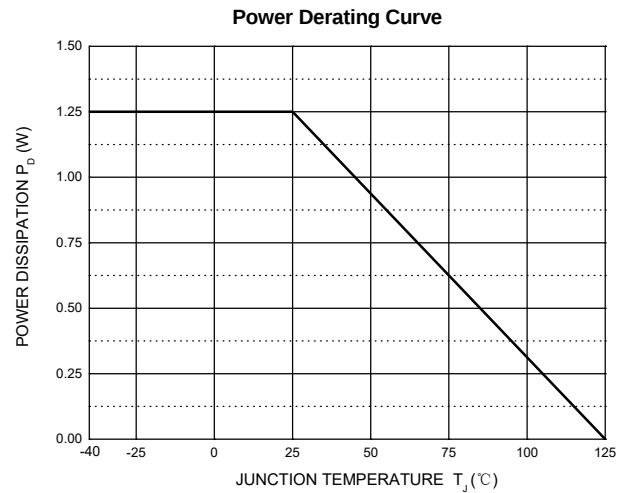
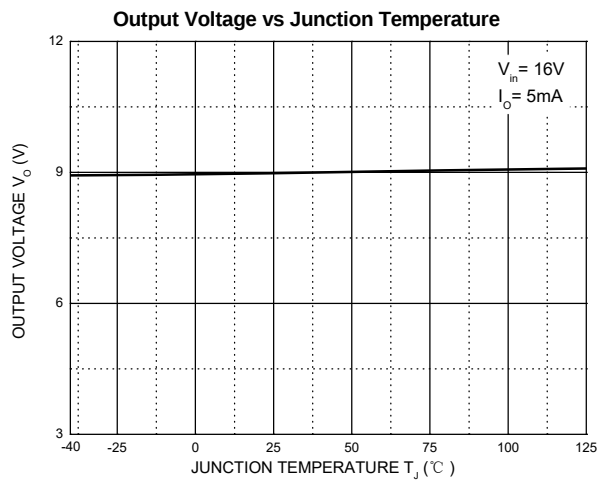
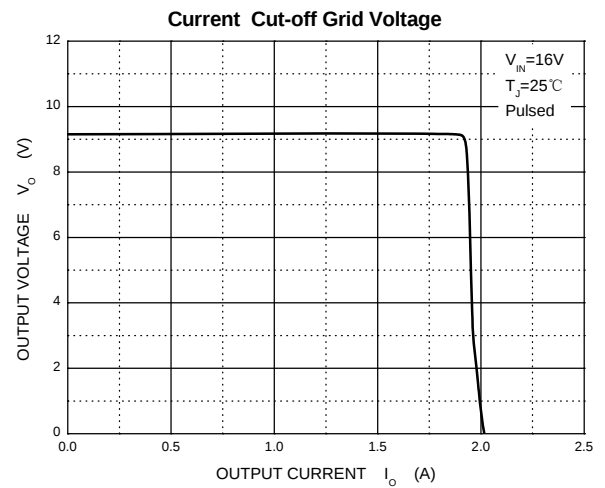
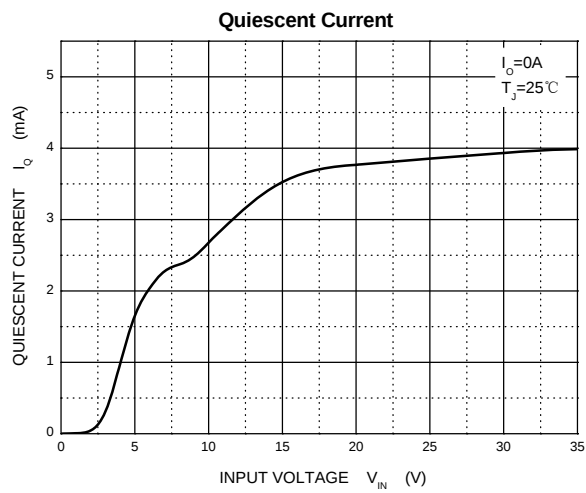
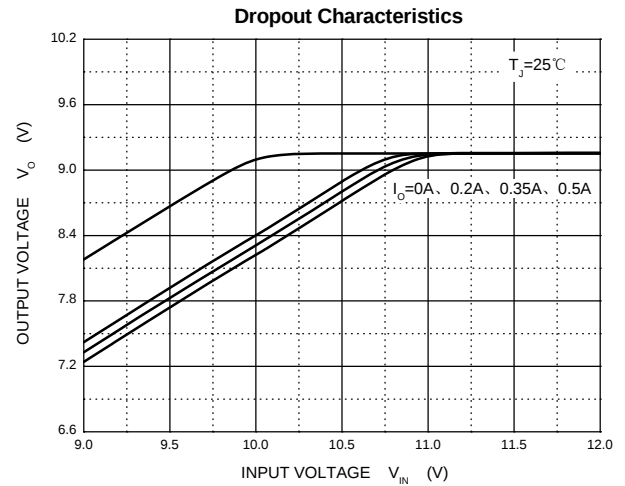
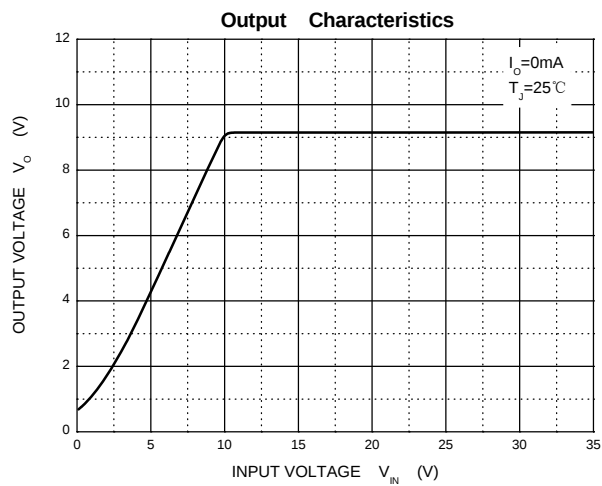
* Pulse test.

TYPICAL APPLICATION

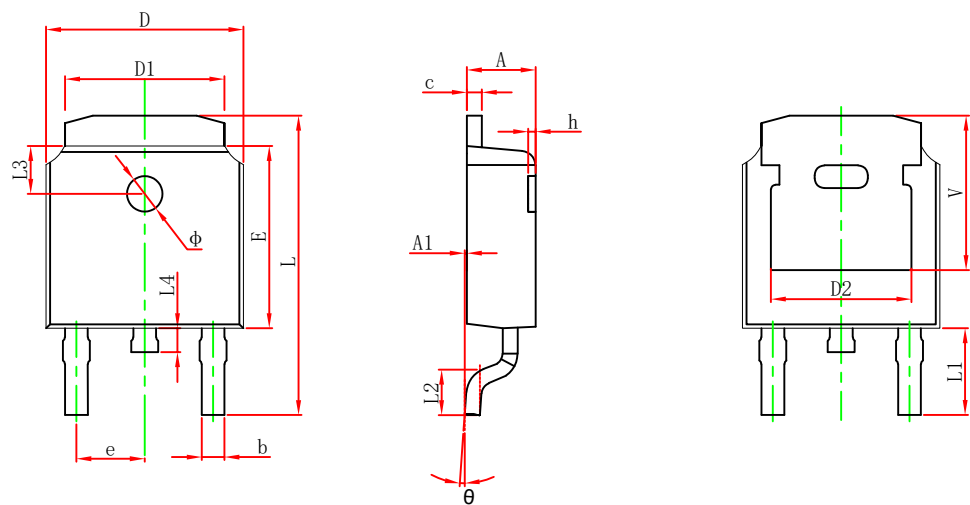


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

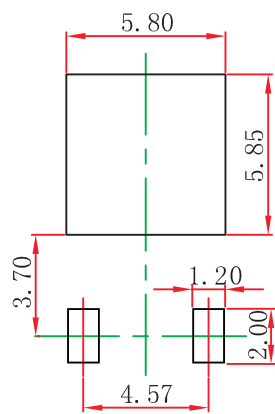


TO-252-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.635	0.770	0.025	0.030
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.382	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.250 REF.		0.207 REF.	

TO-252-2L Suggested Pad Layout



- Note:**
- 1.Controlling dimension:in millimeters.
 - 2.General tolerance:± 0.05mm.
 - 3.The pad layout is for reference purposes only.

NOTICE

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