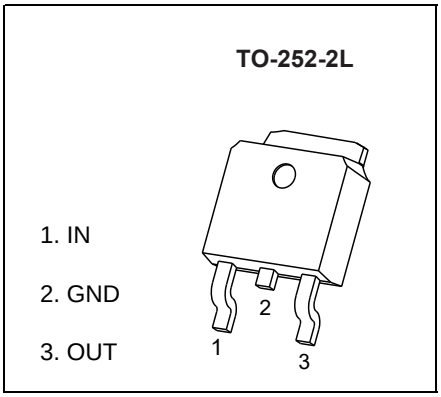
TO-252-2L Plastic-Encapsulate Voltage Regulator

Three-terminal positive voltage regulator

FEATURES

- Maximum output current
  I_{OM}: 0.5 A
- Output voltage
  V_O: 5V
- Continuous total dissipation
  P_D: 1.5 W (T_a= 25 ℃)



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

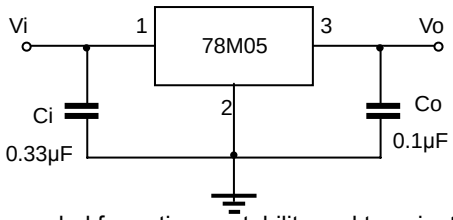
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	66.7	℃/W
Operating Junction Temperature Range	T_{OPR}	-40~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (Vi=10V,Io=350mA, Ci=0.33μF,Co=0.1μF,unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output Voltage	Vo		25℃	4.8	5	5.2	V
		7V≤V_i≤20V, Io=5mA-350mA	-25~125℃	4.75	5	5.25	V
Load Regulation	ΔVo	Io=5mA-0.5A	25℃		15	100	mV
		Io=5mA-200mA	25℃		5	50	mV
Line Regulation	ΔVo	7V≤V_i≤25V, Io=200mA	25℃		3	100	mV
		8V≤V_i≤25V, Io=200mA	25℃		1	50	mV
Quiescent Current	Iq		25℃		4.2	6	mA
Quiescent Current Change	ΔIq	8V≤V_i≤25V, Io=200mA	-25~125℃			0.8	mA
	ΔIq	5mA≤I_O≤350mA	-25~125℃			0.5	mA
Output Noise Voltage	V_N	10Hz≤ f ≤100KHz	25℃		40	200	μV/Vo
Ripple Rejection	RR	8V≤V_i≤18V,f=120Hz,Io=300mA	-25~125℃	62	80		dB
Dropout Voltage	Vd	Io=350mA	25℃		2	2.5	V
Short Circuit Current	Isc	Vi=10V	25℃		300		mA
Peak Current	Ipk		25℃		0.5		A

* Pulse test.

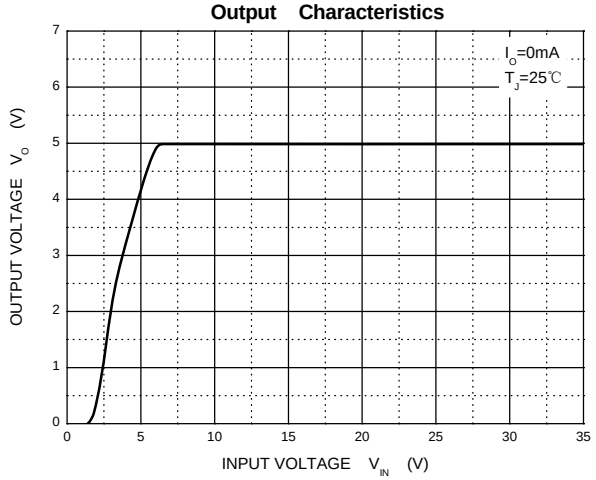
TYPICAL APPLICATION



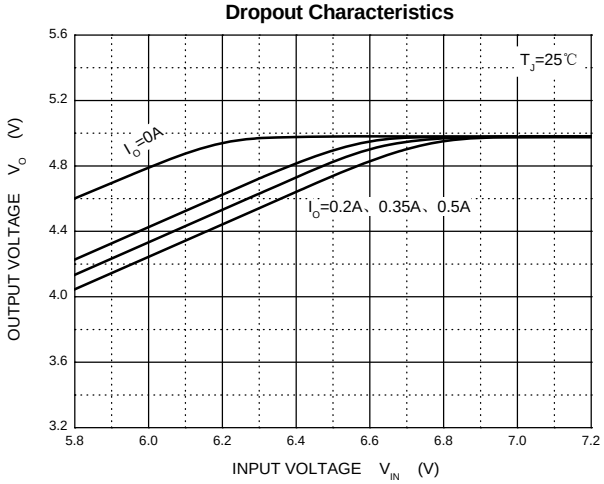
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

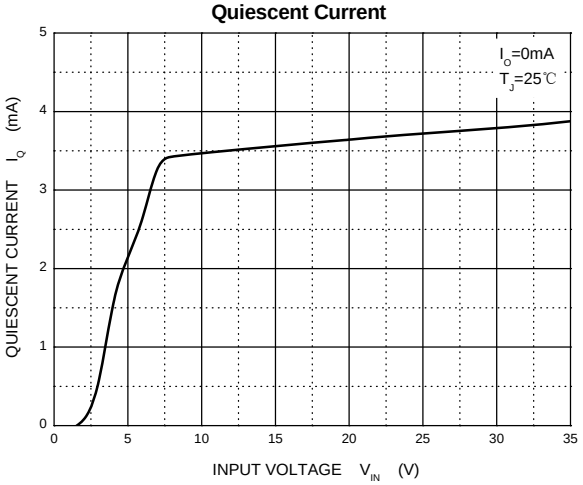
Output Characteristics



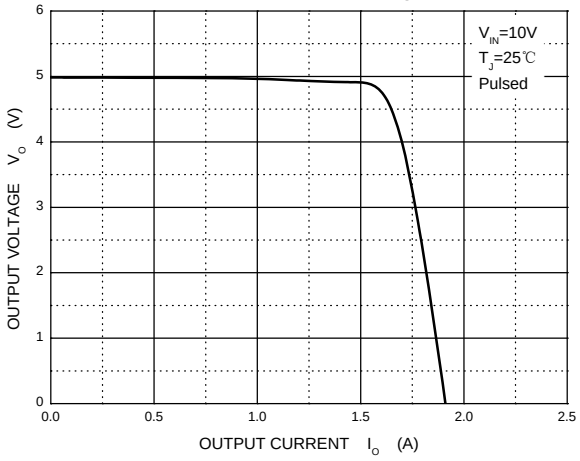
Dropout Characteristics



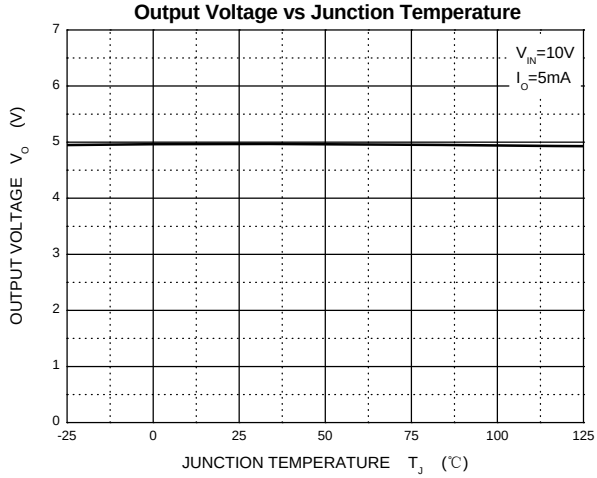
Quiescent Current



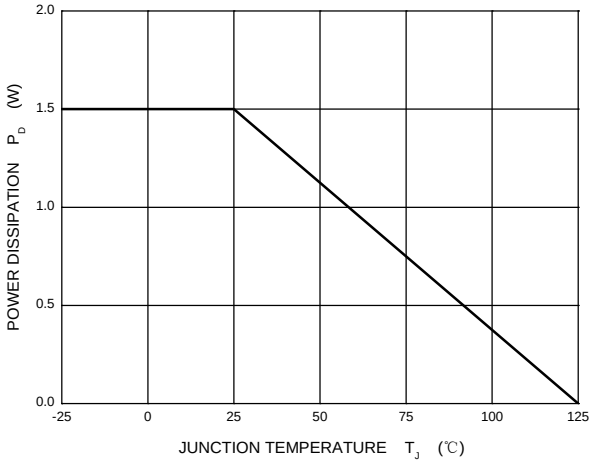
Current Cut-off Grid Voltage



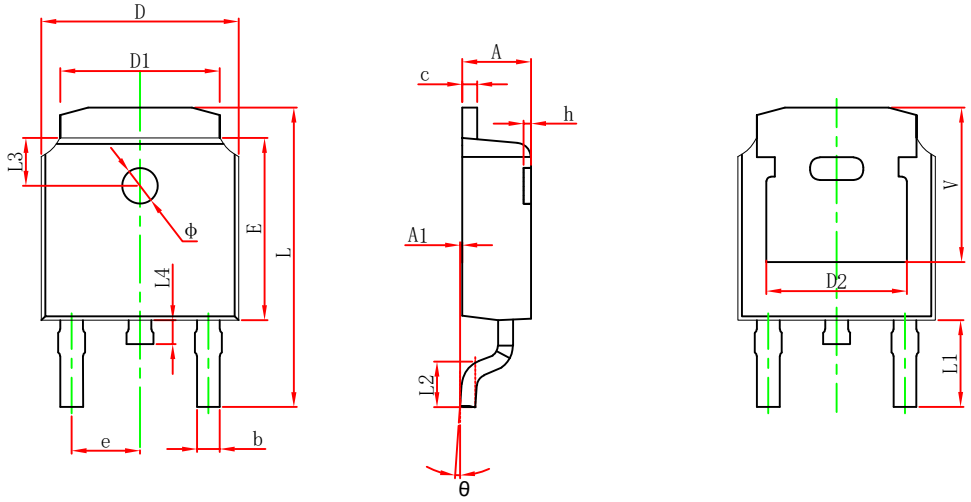
Output Voltage vs Junction Temperature



Power Derating Curve

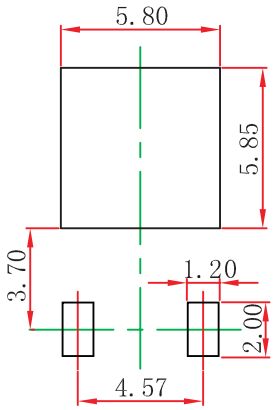


TO-252-2L Outlines Dimensions



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 Suggest Pad Layout



NOTE:

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