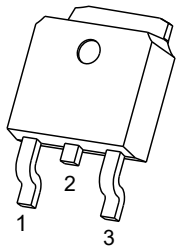
TO-252-2L Plastic-Encapsulate Voltage Regulators

Three-terminal positive voltage regulator

Feature

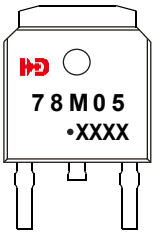
- Maximum Output current I_{OM} : 0.5A
- Output Voltage V_O: 5V
- Continuous Total Dissipation P_D : 1.25W

TO-252-2L



1.IN
2.GND
3.OUT

MARKING



78M05= Device code
Solid dot = Green molding compound device
if none, the normal device
XXXX = Code

Limiting Values (Absolute Maximum Rating)

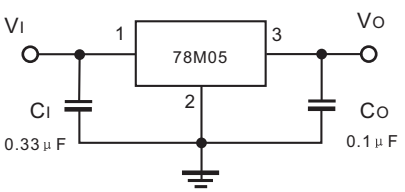
Parameter	Symbol	Rating	Unit
Input Voltage	V_I	35	V
Operating Junction Temperature Range	T_{OPR}	-55 ～ +125	℃
Storage Temperature Range	T_{STG}	-65 ～ +150	℃

Electrical Characteristics

(V_{IN} = 10V, I_{OUT} = 350mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, T_J = 25°C, unless otherwise specified)

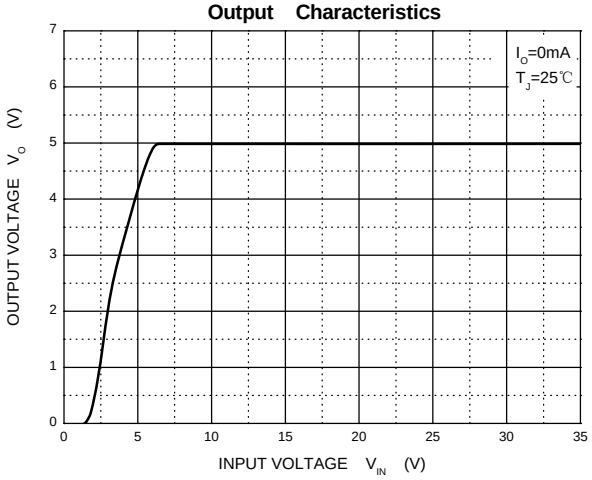
Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Output Voltage	V_O	T_J = 25℃	4.8	5.0	5.2	V
		T_J = 0～125℃, 7V≤V_I≤20V, I_O=5mA～350mA, P_O≤15W	4.75	5.0	5.25	V
Load Regulation	△V_O	T_J = 25℃, I_O=5mA～0.5A		15	100	mV
		T_J = 25℃, I_O=5mA～200mA		5	50	mV
Line Regulation	△V_O	T_J = 25℃, 7V≤V_I≤25V, I_O = 200mA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

TYPICAL APPLICATION

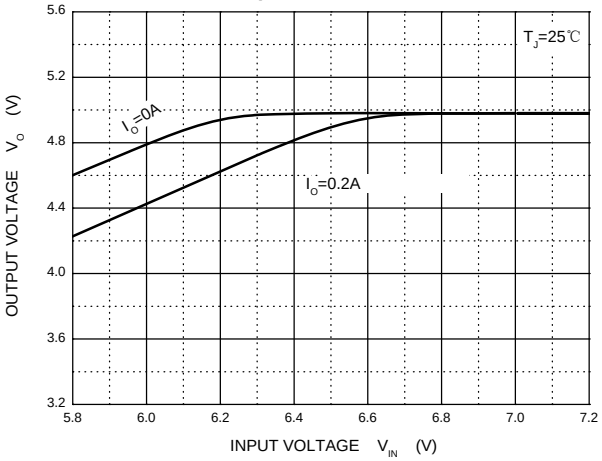


Typical Characteristics

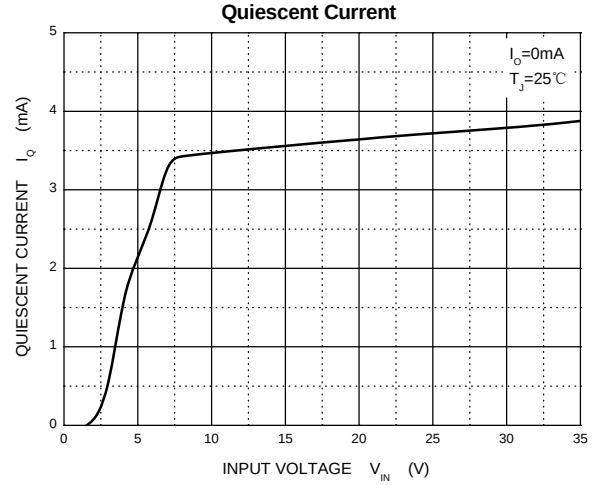
Output Characteristics



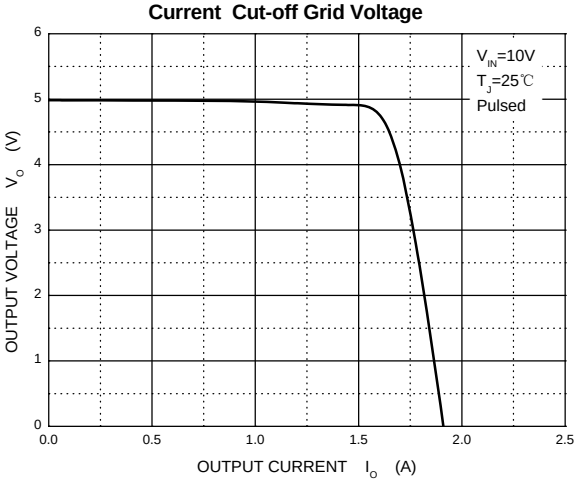
Dropout Characteristics



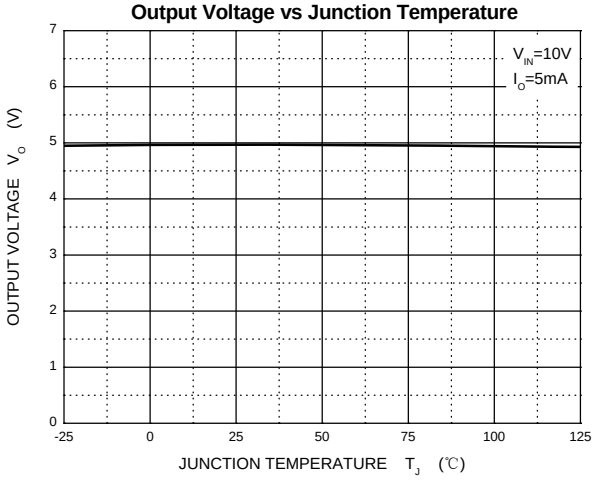
Quiescent Current



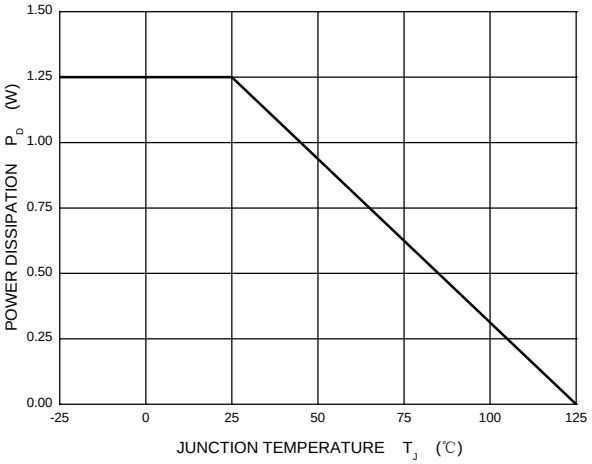
Current Cut-off Grid Voltage



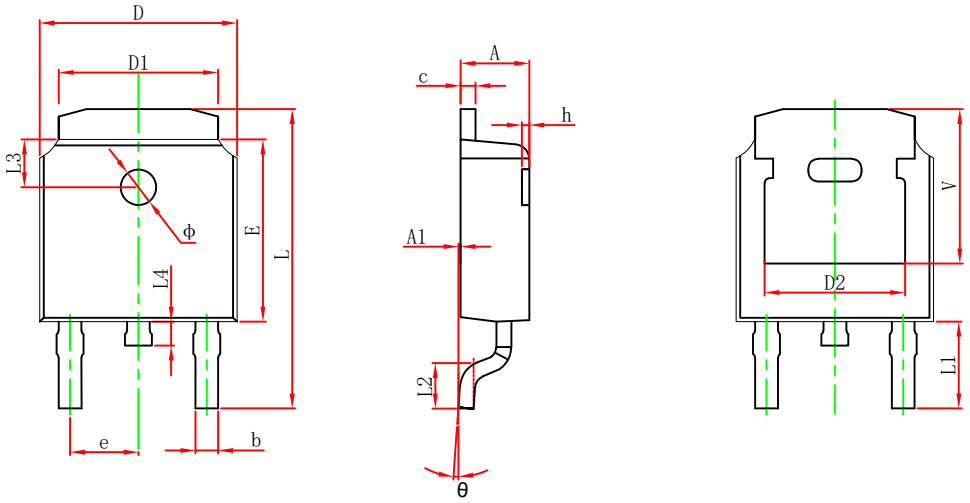
Output Voltage vs Junction Temperature



Power Derating Curve

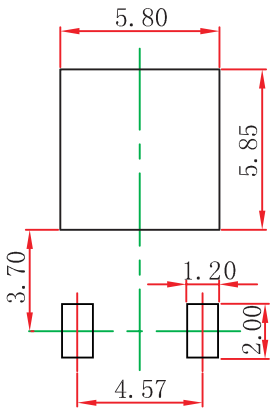


TO-252-2L Package Outline Dimensions



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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