

78M05D

TO-252 Plastic-Encapsulate Voltage Regulators

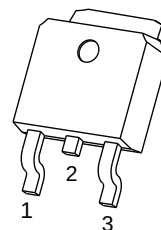
78M05D Three-terminal positive voltage regulator

FEATURES

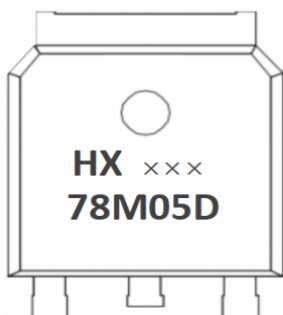
- Maximum output current
 I_{OM} : 0.5 A
- Output voltage
 V_O : 5V
- Continuous total dissipation
 P_D : 1.25 W ($T_a = 25^\circ\text{C}$)

TO-252

- 1.IN
2.GND
3.OUT



MARKING



HX: HUIXIN
XXX: Date code
78M05D: Type

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	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OPR}	-40~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

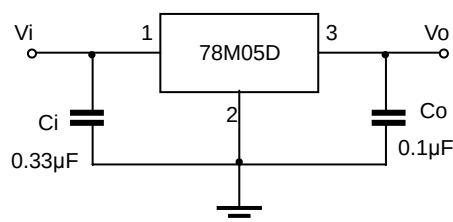
Electrical Characteristics

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=10V, I_o=350mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_j=25^\circ C$	4.85	5	5.15	V
		$7V \leq V_i \leq 20V, I_o=5mA-350mA$	4.75	5	5.25	V
Load Regulation	ΔV_o	$I_o=5mA-0.5A, T_j=25^\circ C$		15	100	mV
		$I_o=5mA-200mA, T_j=25^\circ C$		5	50	mV
Line Regulation	ΔV_o	$7V \leq V_i \leq 25V, I_o=200mA, T_j=25^\circ C$		3	100	mV
		$8V \leq V_i \leq 25V, I_o=200mA, T_j=25^\circ C$		1	50	mV
Quiescent Current	I_q	$T_j=25^\circ C$		4.2	6	mA
Quiescent Current Change	ΔI_q	$8V \leq V_i \leq 25V, I_o=200mA$			0.8	mA
	ΔI_q	$5mA \leq I_o \leq 350mA$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz, T_j=25^\circ C$		40	200	$\mu V/V_o$
Ripple Rejection	RR	$8V \leq V_i \leq 18V, f=120Hz, I_o=300mA$	62	80		dB
Dropout Voltage	V_d	$I_o=350mA, T_j=25^\circ C$		2	2.5	V
Short Circuit Current	I_{sc}	$V_i=10V, T_j=25^\circ C$		300		mA
Peak Current	I_{pk}	$T_j=25^\circ C$		0.5		A

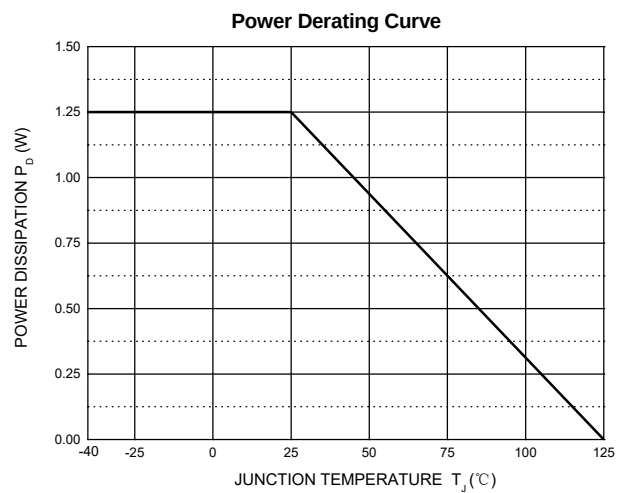
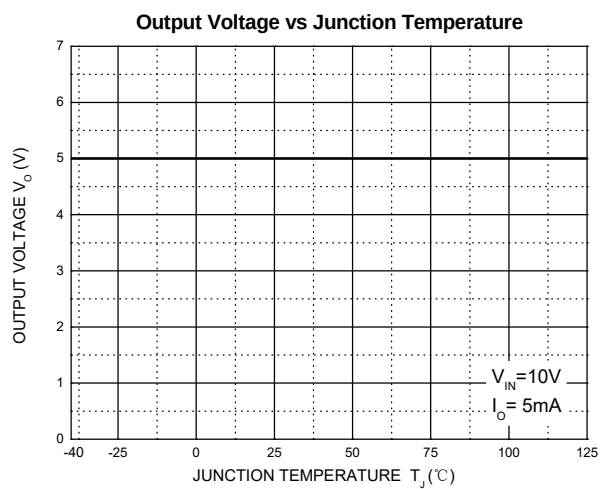
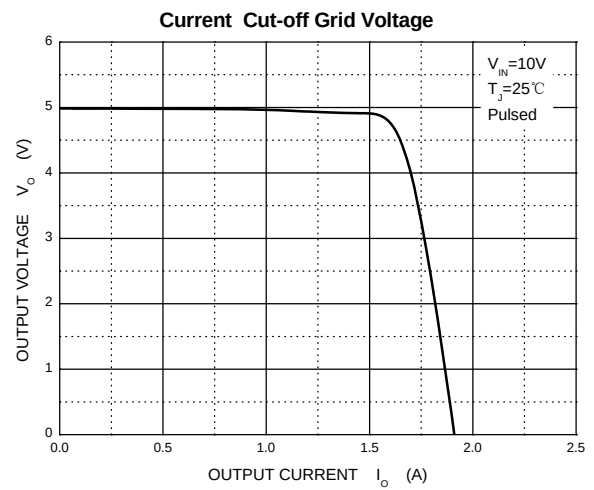
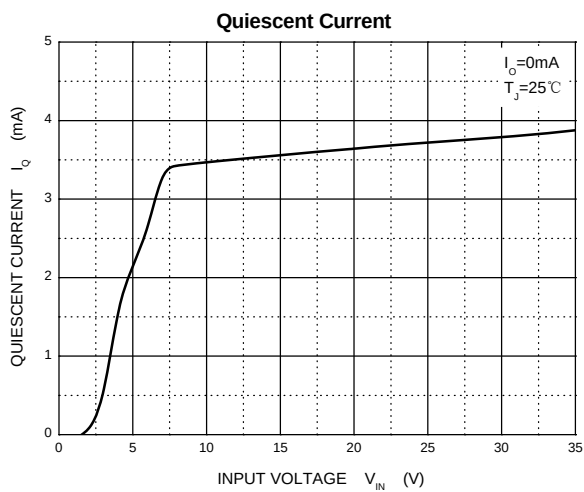
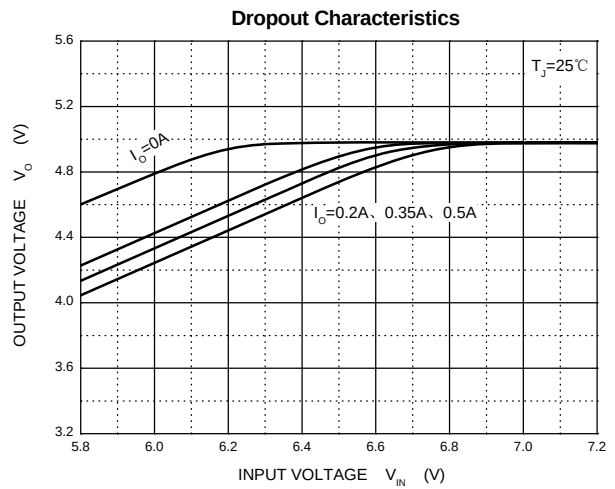
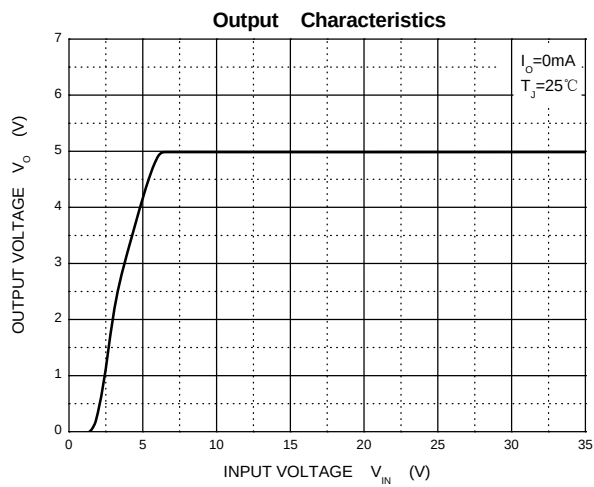
* Pulse test.

TYPICAL APPLICATION

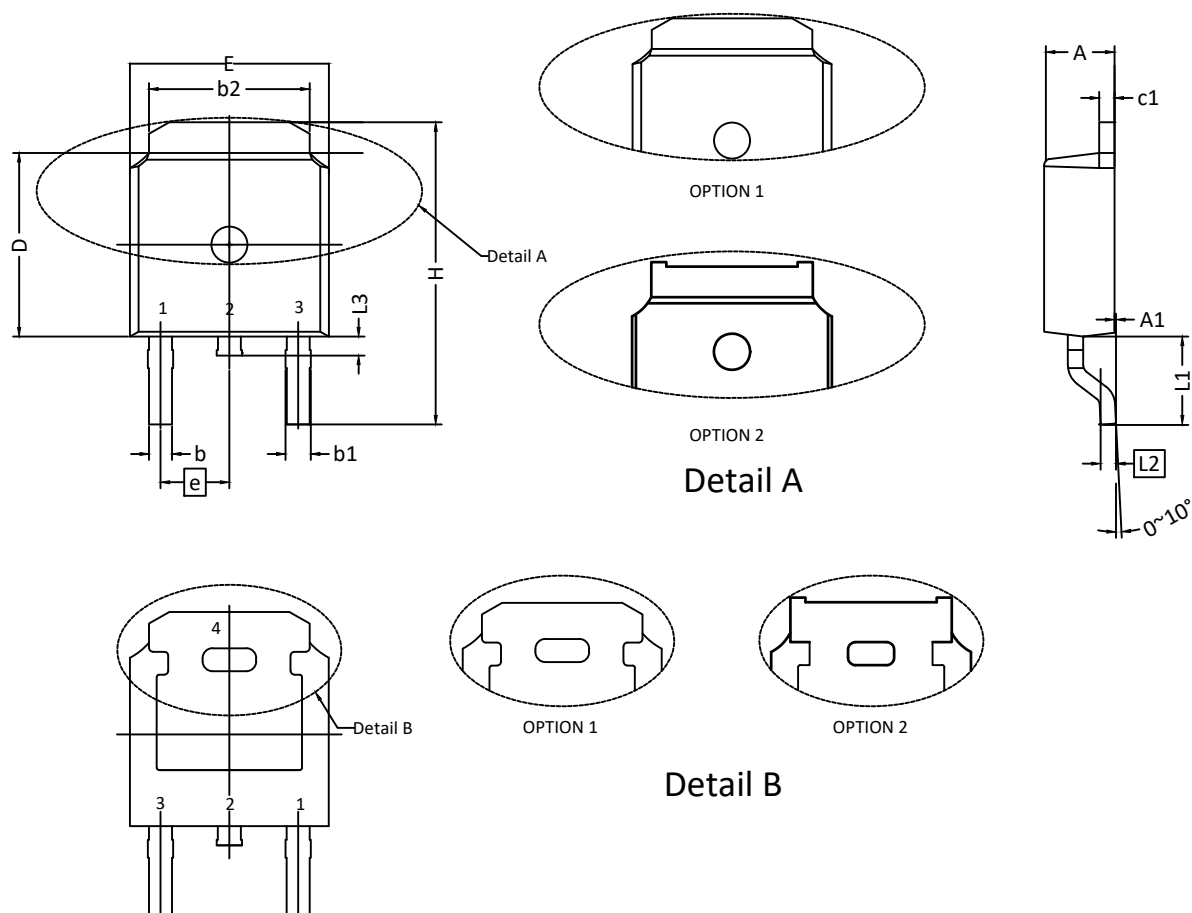


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics



TO-252 Package Outline



SYMBOLS	DIMENSION IN MM		
	MIN	NOM	MAX
A	2.184	2.286	2.400
A1	0.000	---	0.200
b	0.635	0.762	0.889
b1	0.680	0.840	1.143
b2	4.953	5.340	5.500
c1	0.450	0.508	0.630
D	5.969	6.096	6.223
E	6.350	6.604	6.800
e	2.286 BSC		
H	9.398	10.033	10.500
L1	2.921 REF.		
L2	0.408	0.508	0.608
L3	0.600	---	1.016