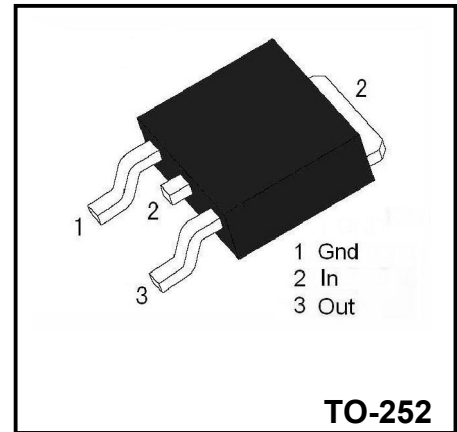## 3-Terminal 1.0A Negative Voltage Regulator
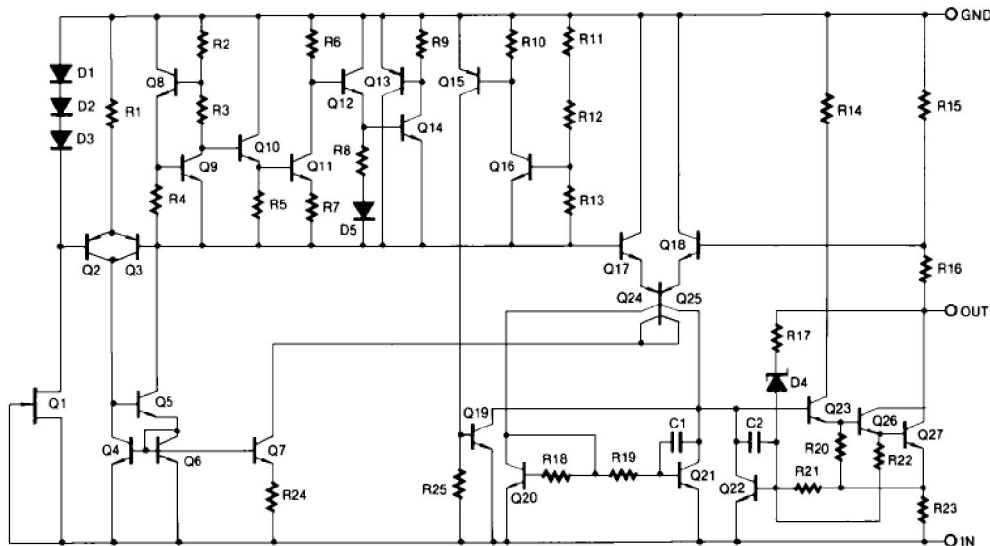
Description

The 79M05 series of 3-Terminal medium current negative voltage regulators are monolithic integrated circuits designed as fixed voltage regulators. These regulators employ internal current limiting, thermal shutdown and safe area compensation making them essentially indestructible.

1 Gnd
2 In
3 Out

TO-252

Features

➢No external components required
➢Output current in excess of 1.0A
➢Internal thermal overload
➢Internal short circuit current limiting
➢Output transistor safe area compensation
➢Output voltages of -5V

Internal Block Digram

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Input voltage	V_{IN}	-30	V
Output voltage	V_O	-5	V
Operating Junction Temperature Range	T_j	-55 ~ 150	°C
Storage Temperature Range	T_{stg}	-65 ~ 150	°C

Electrical Characteristics (Ta = 25℃)

(Refer to the test circuits, I_O=500mA, V_I=-10V, C_I = 2.2μF, C_O=1μF unless otherwise specified)

Parameter	Symbol	Conditions		Value			Unit
				Min	Typ	Max	
Output Voltage	V_O	T_j = 25°C		-4.8	-5.0	-5.2	V
		I_O= 5mA ~ 1.0A , P_O<15W V_I = -7V ~ -20V		-4.75	-5.0	-5.25	
Line Regulation (Note)	$\triangle V_O$	T_j = 25°C	V_I = -7V ~ -25V			100	mV
			V_I = -8V ~ -12V			50	
Load Regulation (Note)	$\triangle V_O$	T_j = 25°C	I_O= 5mA ~ 1.0A			100	mV
			I_O= 0.25A ~ 0.75A			50	
Quiescent Current	I_Q	T_j = 25°C				6.0	mA
Quiescent Current Change	$\triangle I_Q$	I_O= 5mA ~ 1.0A				0.5	mA
		V_I = -8 ~ -25V				0.8	
Output Voltage Drift	$\triangle V/\triangle T$	I_O = 5mA			-0.4		mV/°C
Output Noise Voltage	V_N	f = 10Hz ~ 100KHz			40		μV
Ripple Rejection	RR	f = 120Hz, $\triangle V_I$ = 10V			60		dB
Dropout Voltage	V_D	T_j =25°C, I_O = 1.0A			2		V
Short Circuit Current	I_{SC}	T_j =25 , V_I= -35V			300		mA
Peak Current	I_{PK}	T_j = 25°C			1.6		A

Notes:

Load and line regulation are specified at constant junction temperature. Change in Vo due to heating effects must be taken into account separately. Pulse testing with low duty is used.
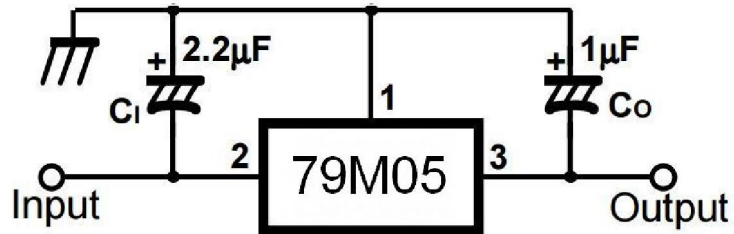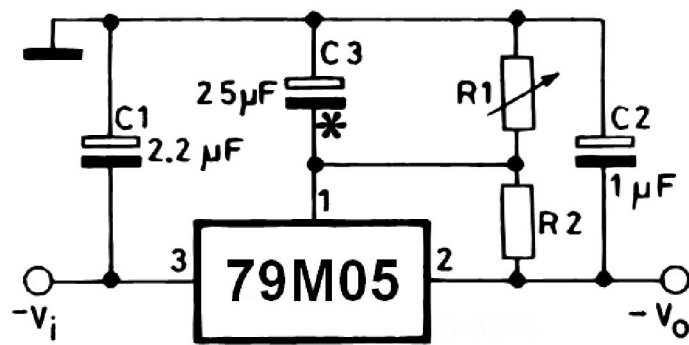
Typical Applications

Figure.1 Fixed output regulat

Figure.2 Circuit for increasing output voltage

Typical Characteristics
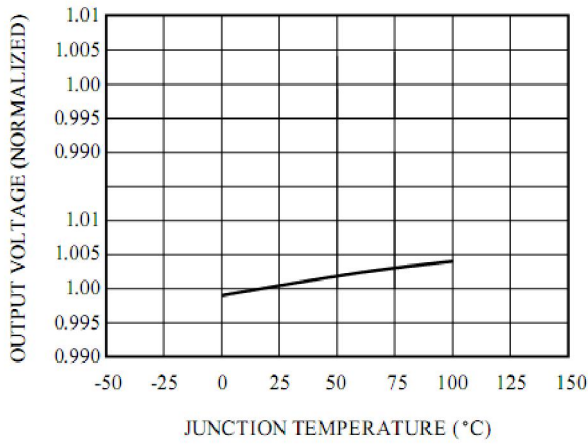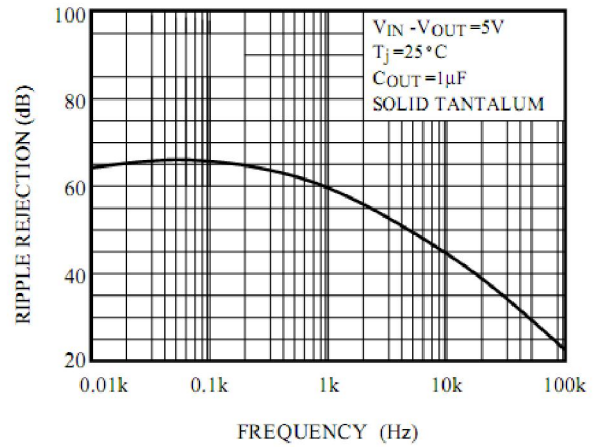
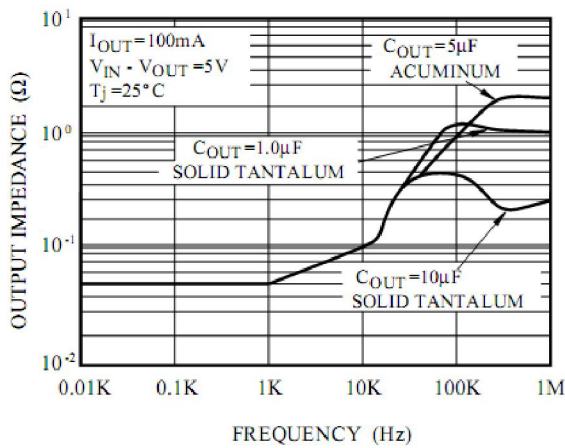Figure 3. OutputVoltagevs.Temperature

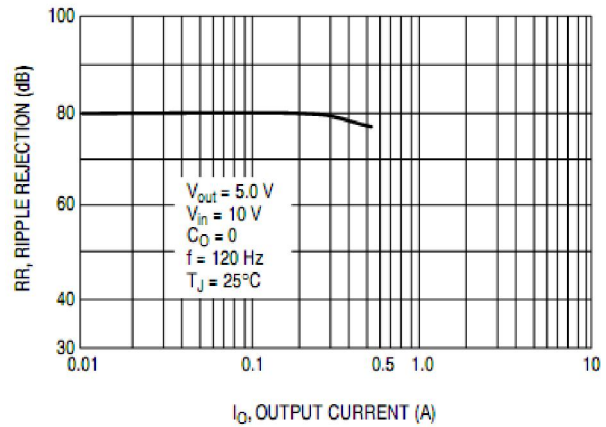Figure 4. Ripple rejection

Figure 5. Output impedance

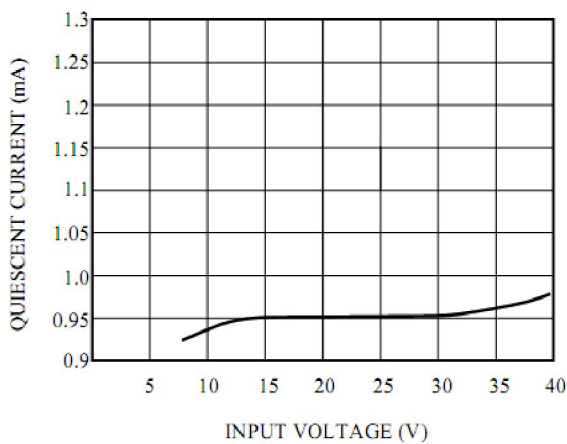Figure6. Minimum input-output differential

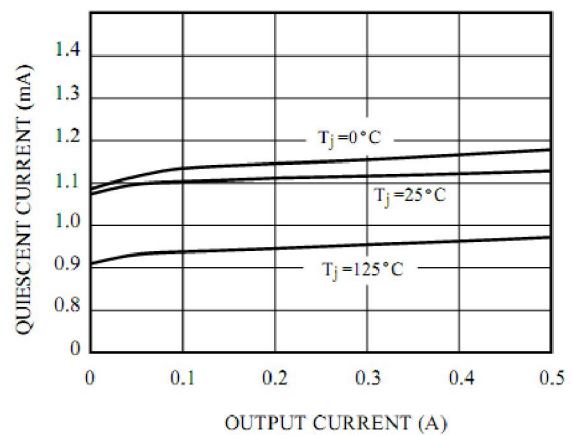Figure 7. Bias Current vs Input Voltage

Figure 8. Quiescent current vs load current
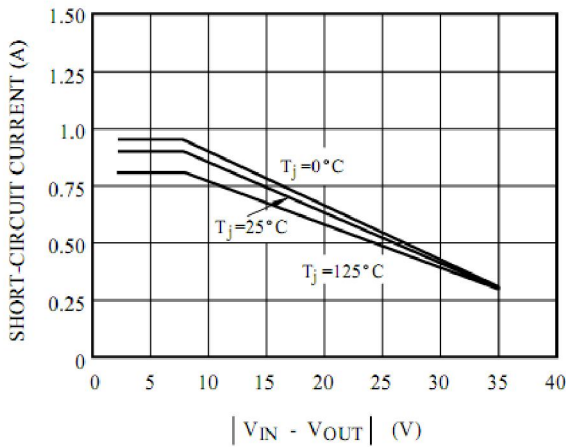
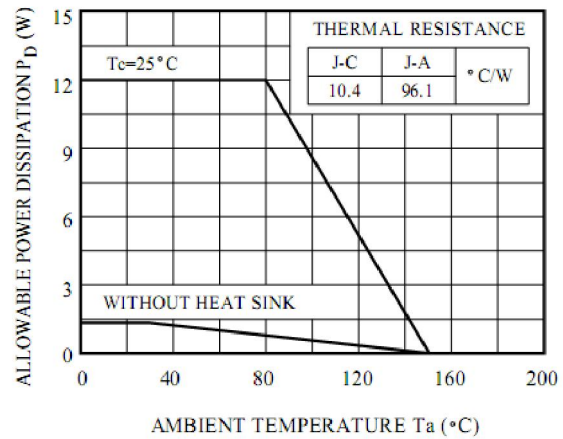## Typical Characteristics

Figure 9. Short-circuit current

Figure 10. Power Derating

Package Dimensions

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.098
A1	0.00	0.12	0.000	0.005
A2	2.20	2.40	0.087	0.094
B	1.20	1.60	0.047	0.063
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.35	6.65	0.250	0.262
D1	5.20	5.40	0.205	0.213
E	5.40	5.70	0.213	0.224
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	9.60	10.20	0.378	0.402
L1	2.70	3.10	0.106	0.122
L2	1.40	1.80	0.055	0.071
L3	0.90	1.50	0.035	0.059

Product Specification Classification

Part Number	Package	Marking	Pack
79M05	TO-252	YFW 79M05 XXXXX	2500PCS/Tape