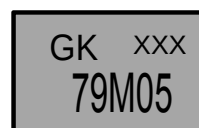
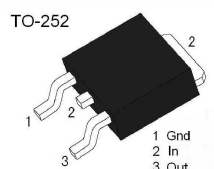


Description

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.



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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings (@ $T = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Input voltage	V_{IN}	-30	V
Output voltage	V_{O}	-5	V
Operating Junction Temperature Range	T_{j}	-55 ~ 150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-65 ~ 150	$^{\circ}\text{C}$

Electrical Characteristics ($T_j=25^{\circ}\text{C}$ unless otherwise noted)

(Refer to the test circuits, $I_o=500\text{mA}$, $V_i=-10\text{V}$, $C_i=2.2\mu\text{F}$, $C_o=1\mu\text{F}$ unless otherwise specified)

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

Notes:

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

RATING AND CHARACTERISTIC CURVES

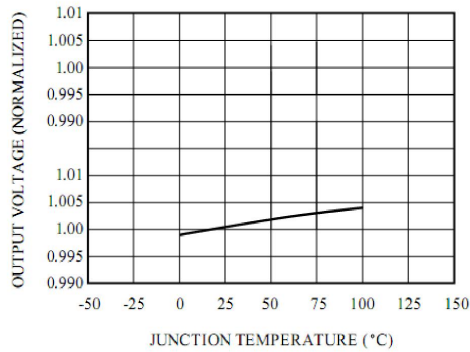


Figure 3. Output Voltage vs. Temperature

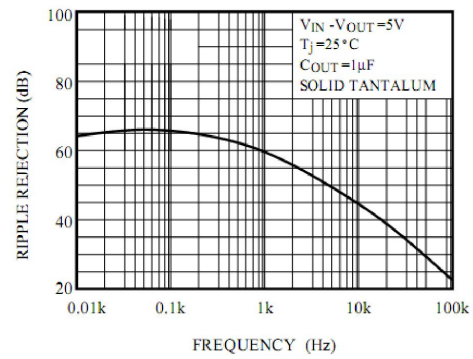


Figure 4. Ripple rejection

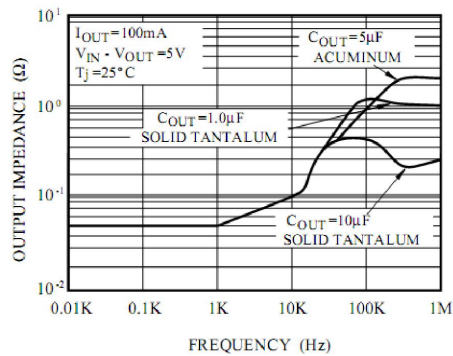


Figure 5. Output impedance

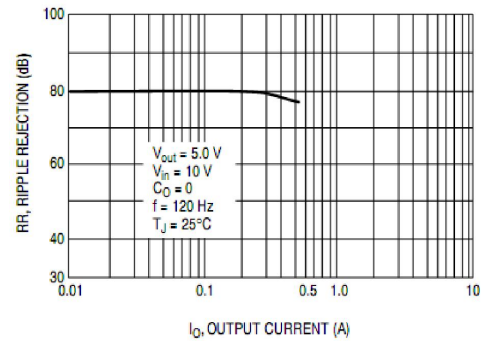


Figure 6. Minimum input-output differential

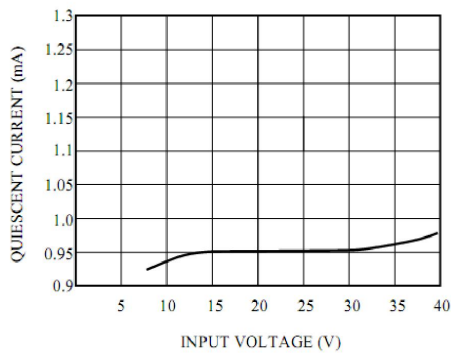


Figure 7. Bias Current vs Input Voltage

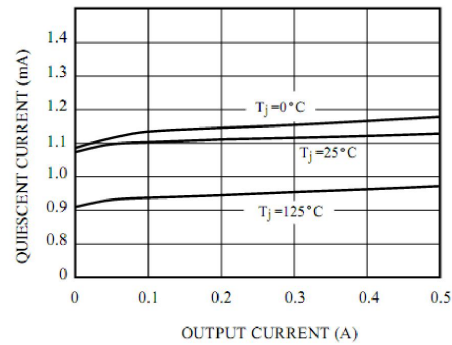


Figure 8. Quiescent current vs load current

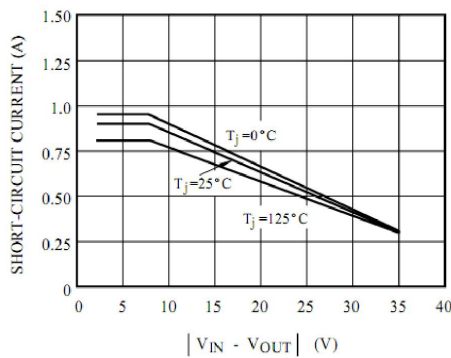


Figure 9. Short-circuit current

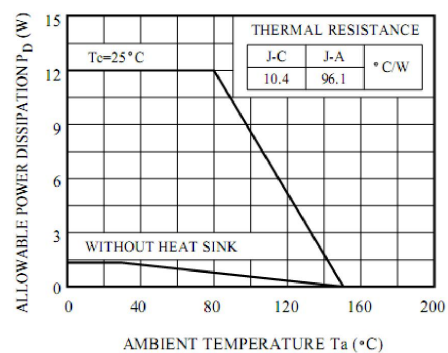


Figure 10. Power Derating

Typical Applications

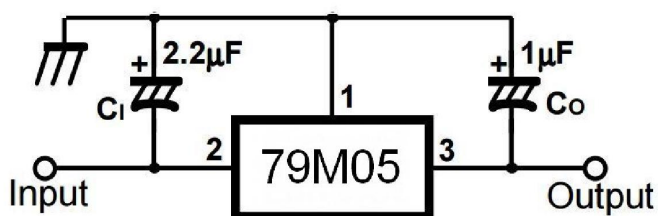


Figure.1 Fixed output regulat

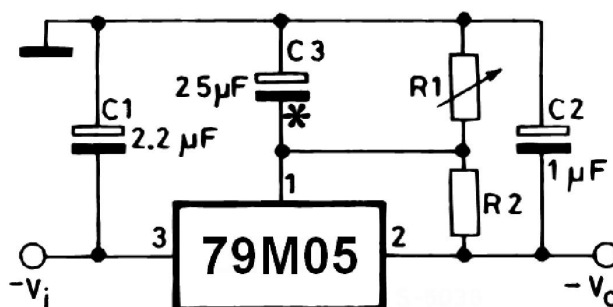
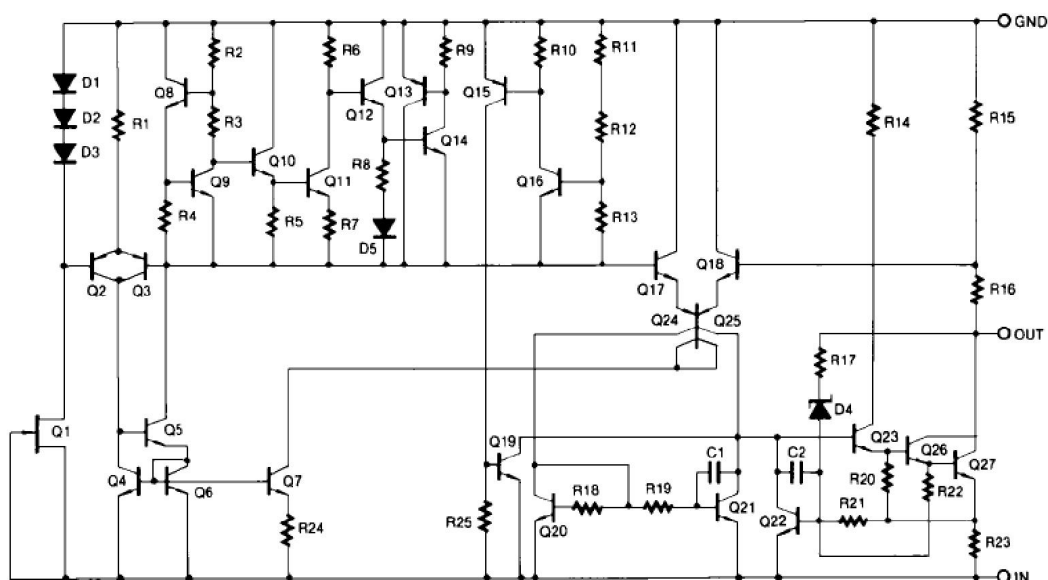


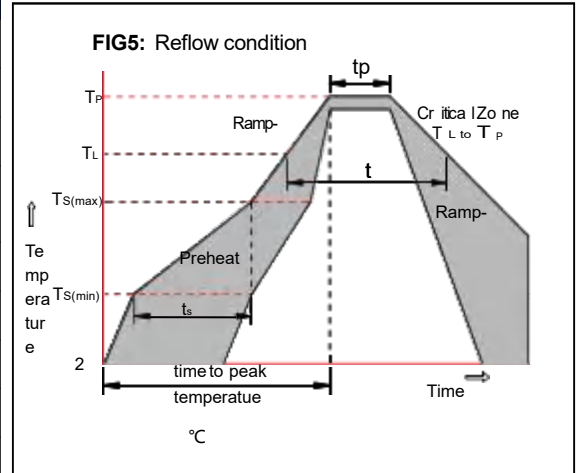
Figure.2 Circuit for increasing output voltage

Internal Block Digram



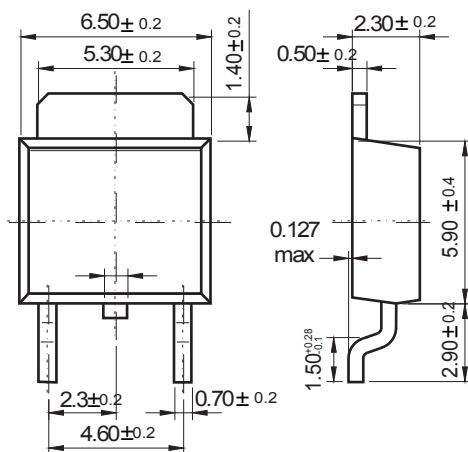
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C

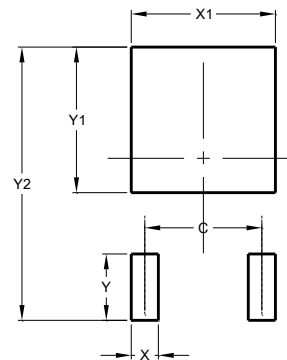


Package Dimensions & Suggested Pad Layout

TO-252



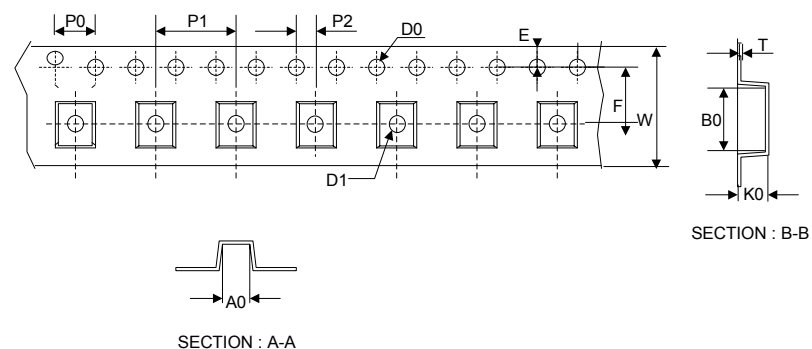
Dimensions in inches and (millimeters)



Dimensions	Value (in mm)
C	4.55
X	1.50
X1	5.80
Y	2.70
Y1	6.00
Y2	10.90

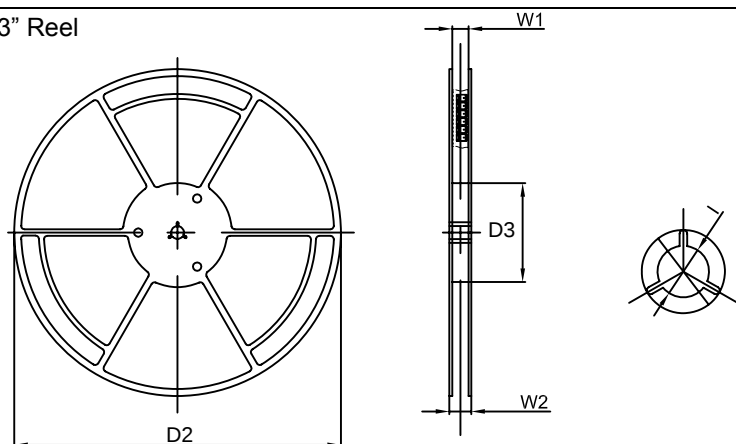
Tape & rell specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
D0	1.55±0.15
D1	1.55±0.20
E	1.75±0.20
F	7.50±0.20
W	16.00±0.20
A0	7.10±0.20
B0	10.50±0.20
K0	2.70±0.20
T	0.30±0.10
D2	330.0±5.0
D3	100.0±4.0
W1	20.0±5.0
W2	25.0±5.0
I	13.0±2.0

13" Reel



Quantity: 2500PCS