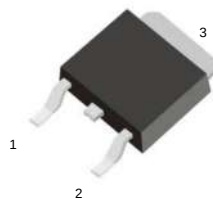
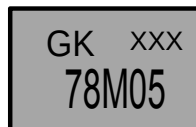


Description

The 78M05 three-terminal positive regulators are available in the TO-252 package with several fixed output voltages making it useful in a wide range of applications.

Features

Output Current up to 1.0A
Output Voltages of 5V
Thermal Overload Protection
Short Circuit Protection
Output Transistor Safe Operating area (SOA)Protection

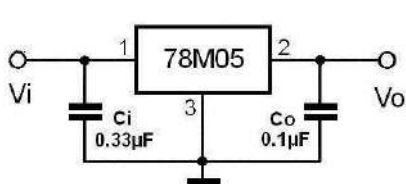


- 1.IN
- 2.VOUT
- 3.GND

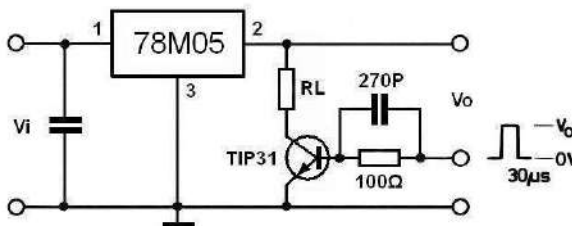
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	V_{IN}	35	V
Out put Voltage	V_O	5	V
Continuous total dissipation	P_D	1.25	W
Operating Temperature Range	T_{OPR}	0 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

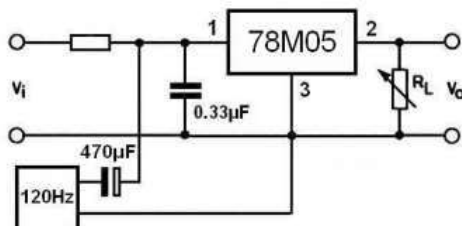
TYPICAL APPLICATION



DC Parameter



Load Regulation



Ripple Rejection

Electrical Characteristics

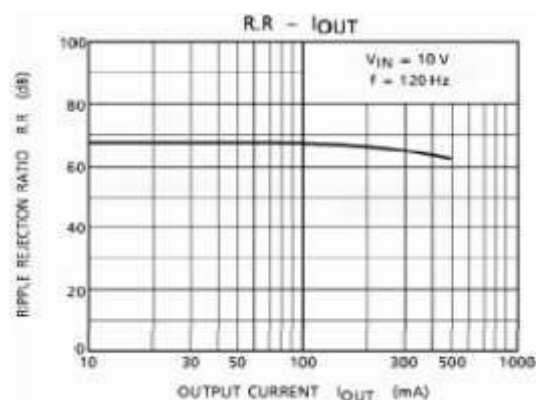
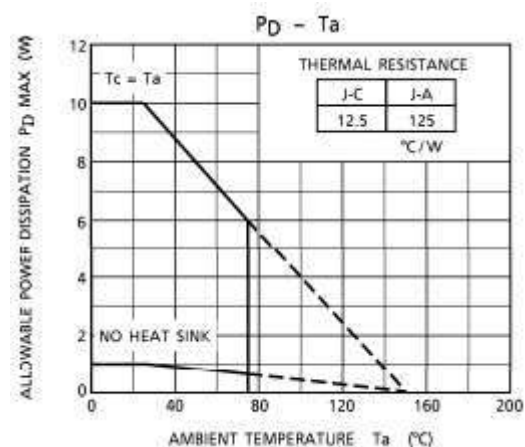
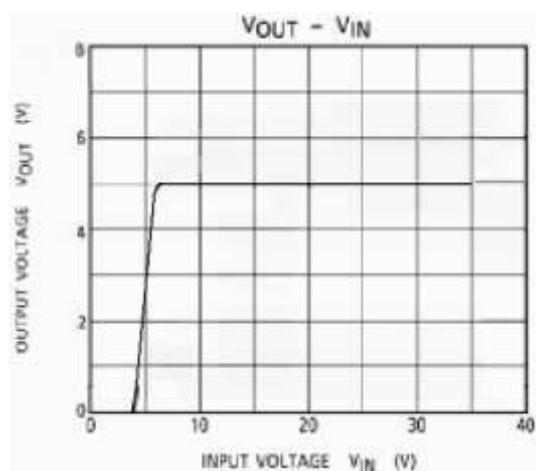
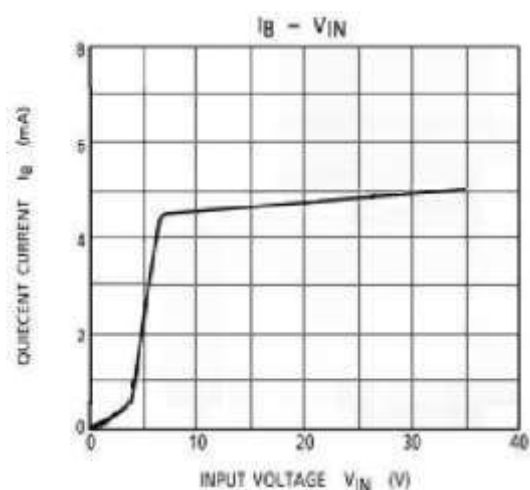
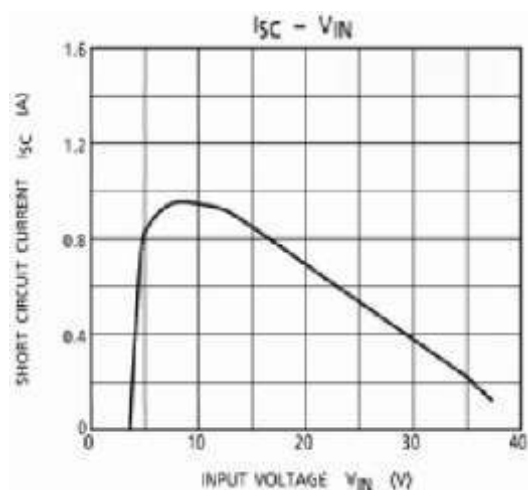
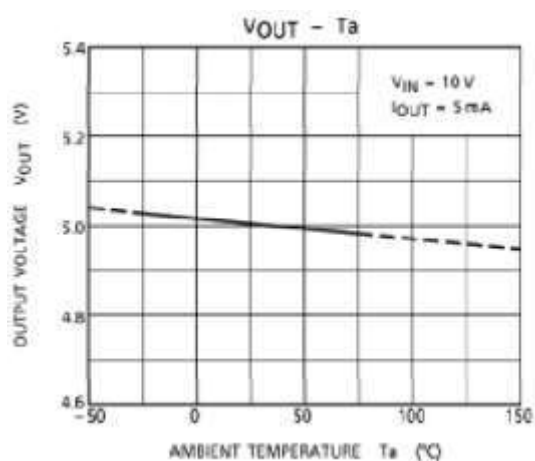
(Refer to the test circuits, $I_O=750\text{mA}$, $V_I=10\text{V}$, $C_I = 0.33\mu\text{F}$, $C_O=0.1\mu\text{F}$ unless otherwise specified)

Parameter	Symbol	Conditions		Value			Unit
				Min	Typ	Max	
		$T_j = 25^\circ\text{C}$		4.8		5.2	
Output Voltage	V_O	$V_I = 7 \sim 20\text{V}$ $I_O=5 \sim 1\text{A}$		4.75	5	5.25	V
Line Regulation	ΔV_O	$T_j = 25^\circ\text{C}$	$V_I = 7 \sim 25\text{V}$			120	mV
			$V_I = 8 \sim 22\text{V}$			60	
Load Regulation	ΔV_O	$T_j = 25^\circ\text{C}$	$I_O=5\text{mA} \sim 1\text{A}$			120	mV
			$I_O=0.25\text{A} \sim 0.75\text{A}$			60	
Quiescent Current	I_Q	$T_j = 25^\circ\text{C}$				8	mA
Quiescent Current Change	ΔI_Q	$I_O=5\text{mA} \sim 1\text{A}$				0.5	mA
		$V_I = 7 \sim 25\text{V}$				1.2	
Output Voltage Drift	$\Delta V/\Delta T$	$I_O = 5\text{mA}$ $T_j = 0 \text{ to } +125^\circ\text{C}$			-0.8		mV/ $^\circ\text{C}$
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$			40		μV
Ripple Rejection	RR	$f = 120\text{Hz}$, $I_O = 300\text{mA}$ $V_I = 8 \text{ to } 18\text{V}$		60			dB
Dropout Voltage	V_D	$T_j = +25^\circ\text{C}$, $I_O = 1\text{A}$			2		V
Short Circuit Current	I_{SC}	$T_j = +25^\circ\text{C}$, $V_I = 35\text{V}$			300		mA
Peak Current	I_{PK}				1.50		A

Notes:

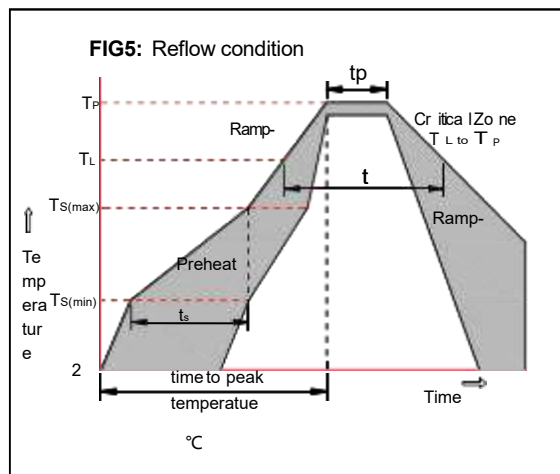
*Load and line regulation are specified at constant junction temperature. Change in V_O due to heating effects must be taken into account separately. Pulse testing with low duty is used.

RATING AND CHARACTERISTIC CURVES



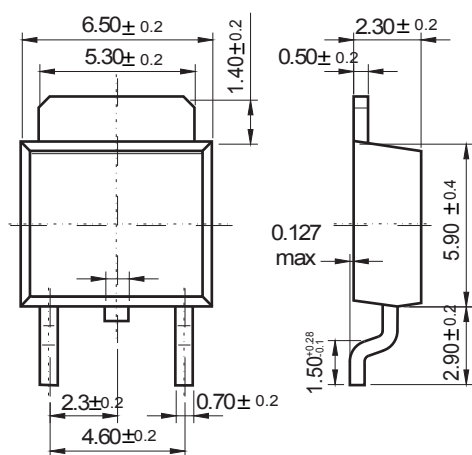
Soldering parameters

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

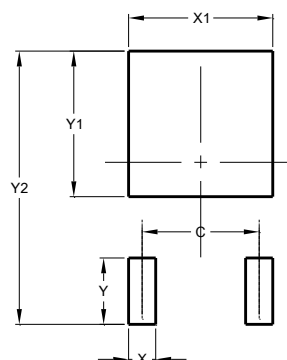


Package Dimensions & Suggested Pad Layout

TO-252

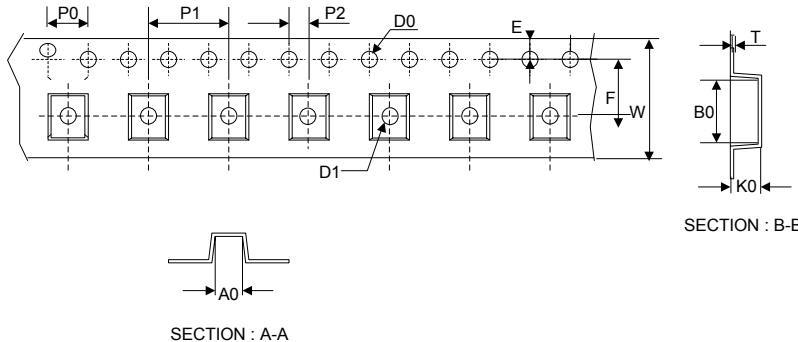
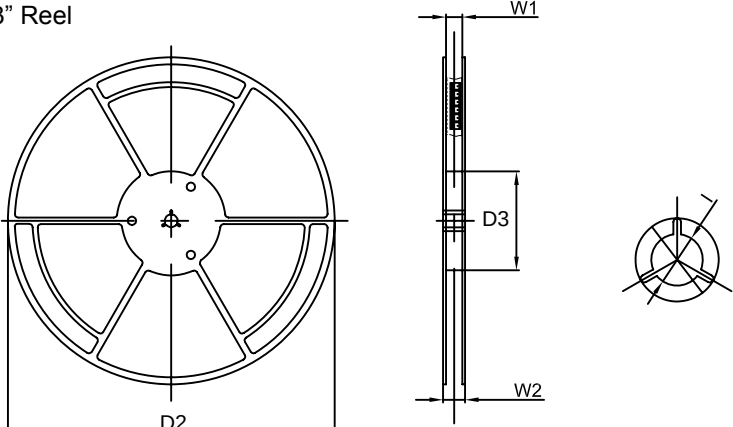


Dimensions in inches and (millimeters)



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

Tape & reel 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
13" Reel		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
		Quantity: 2500PCS	