



Micro Commercial Components



Micro Commercial Components  
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# MC78M05ACDT

## Features

- Output current in excess of 0.5 Ampere
- Internal thermal overload protection
- Internal short-circuit current limiting
- High power dissipation capability
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

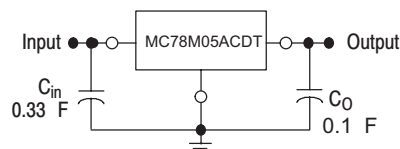
## Maximum Ratings @ T<sub>a</sub>=25°C, Unless Otherwise Noted

Parameter	Symbol	Value	Unit
Input Voltage	V <sub>i</sub>	35	V
Power Dissipation	P <sub>D</sub>	1.25	W
Operating Junction Temperature	T <sub>OPR</sub>	0 ---+125	°C
Storage Temperature Range	T <sub>STG</sub>	-65---+150	°C

## Electrical Characteristics (V<sub>i</sub>=10V, I<sub>o</sub>=350mA, 0°C<T<sub>j</sub><125°C, C<sub>i</sub>=0.33µF, C<sub>o</sub>=0.1µF, Unless Otherwise Specified)

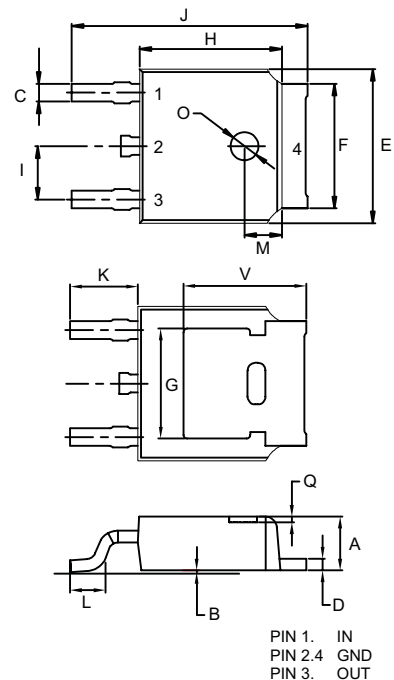
Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V <sub>o</sub>	4.9V	5.0V	5.1V	T <sub>J</sub> =25°C
		4.85V	5.0V	5.15V	7V ≤ V <sub>i</sub> ≤ 20V, 5mA ≤ I <sub>o</sub> ≤ 350mA, P <sub>D</sub> =15W
Load Regulation	ΔV <sub>o</sub>		15mV	100mV	5mA ≤ I <sub>o</sub> ≤ 0.5A, T <sub>J</sub> =25°C
			5.0mV	50mV	5mA ≤ I <sub>o</sub> ≤ 200mA, T <sub>J</sub> =25°C
Line regulation	ΔV <sub>o</sub>		3.0mV	100mV	7V ≤ V <sub>i</sub> ≤ 25V, I <sub>o</sub> =0.2A
			1.0mV	50mV	8V ≤ V <sub>i</sub> ≤ 25V, I <sub>o</sub> =0.2A
Quiescent Current	I <sub>q</sub>		4.2mA	6.0mA	T <sub>J</sub> =25°C
Quiescent Current Change	ΔI <sub>q</sub>			0.8mA	8V ≤ V <sub>i</sub> ≤ 25V, I <sub>o</sub> =0.2A
				0.5mA	5mA ≤ I <sub>o</sub> ≤ 350mA
Output Noise Voltage	V <sub>N</sub>		40µV	200µV	10Hz ≤ f ≤ 120Hz
Ripple Rejection	RR	62dB	80dB		8V ≤ V <sub>i</sub> ≤ 18V f=120Hz, I <sub>o</sub> =0.3A T <sub>J</sub> =25°C
Dropout Voltage	V <sub>d</sub>		2.0V	2.5V	I <sub>o</sub> =0.35A, T <sub>J</sub> =25°C
Output Short Circuit Current	I <sub>sc</sub>		300mA		V <sub>i</sub> =10V, T <sub>J</sub> =25°C
Peak Output Current	I <sub>pk</sub>		0.7A		T <sub>J</sub> =25°C

## TYPICAL APPLICATION



## Three-Terminal Positive Voltage Regulators

### DPAK



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		

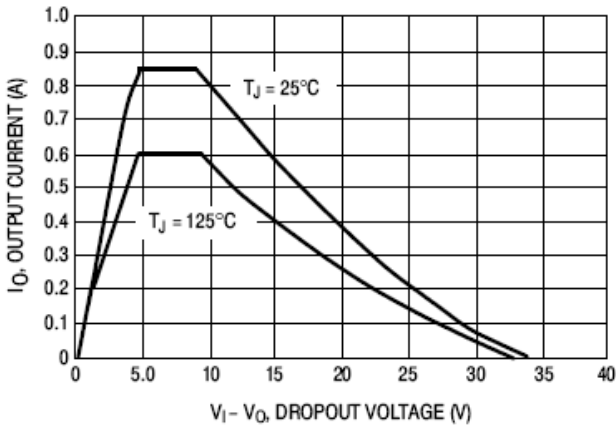


Figure 1. Peak Output Current versus Dropout Voltage

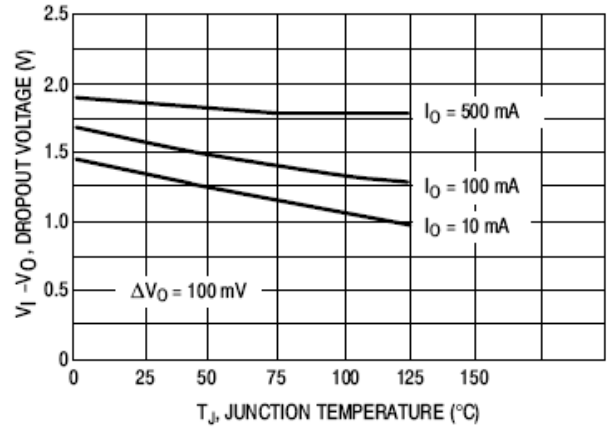


Figure 2. Dropout Voltage versus Junction Temperature

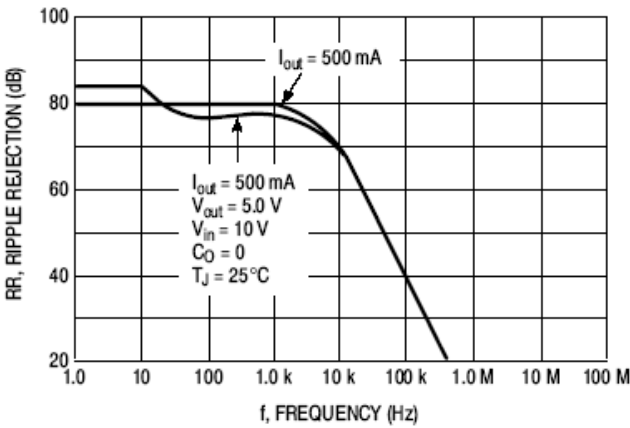


Figure 3. Ripple Rejection versus Frequency

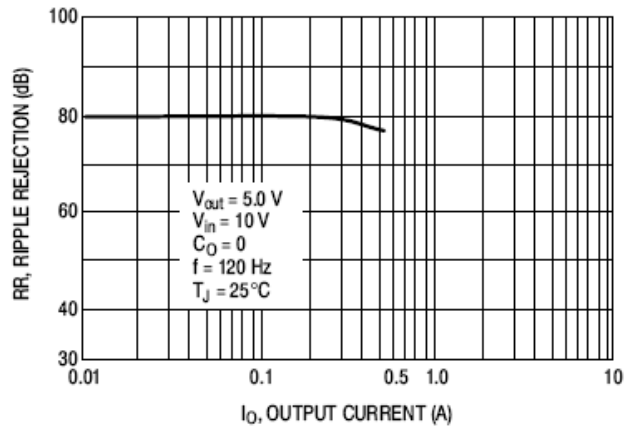


Figure 4. Ripple Rejection versus Output Current

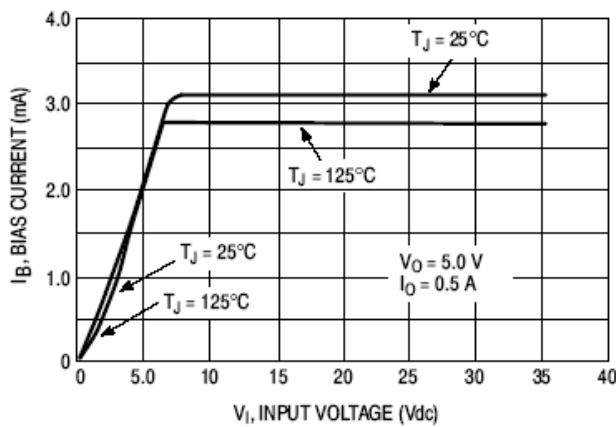


Figure 5. Bias Current versus Input Voltage

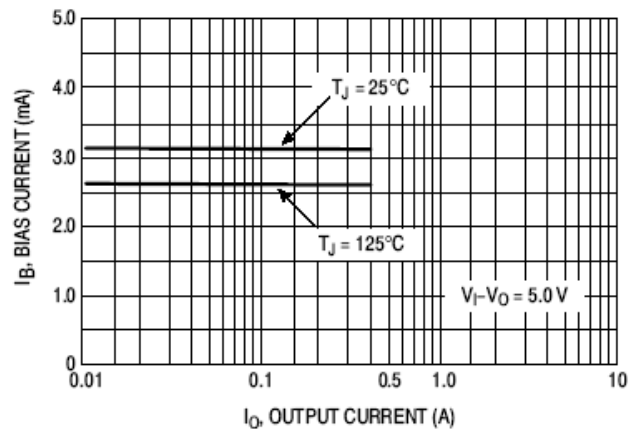


Figure 6. Bias Current versus Output Current



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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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