



Micro Commercial Components



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MC78M05CDT

Three-Terminal Positive Voltage Regulators

Features

- Halogen free available upon request by adding suffix "-HF"
- 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

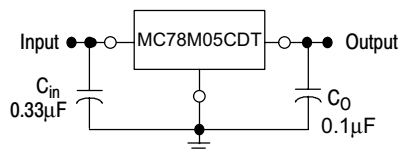
Maximum Ratings @ T_A=25°C, Unless Otherwise Noted

Parameter	Symbol	Value	Unit
Input Voltage	V _i	35	V
Power Dissipation	P _D	1.25	W
Operating Junction Temperature	T _{OPR}	0 ---+125	°C
Storage Temperature Range	T _{STG}	-65---+150	°C

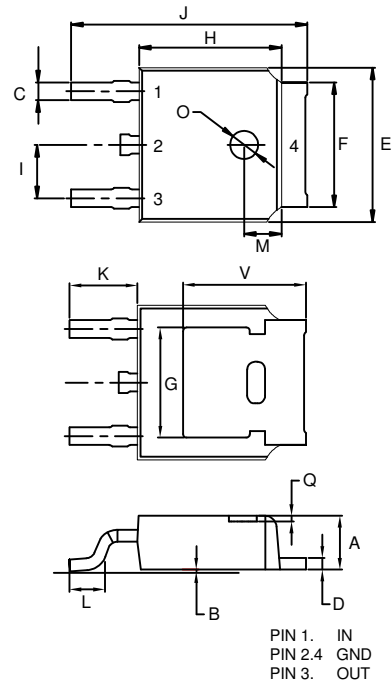
Electrical Characteristics (V_i=10V, I_o=350mA, 0°C < T_j < 125°C, C_i=0.33µF, C_o=0.1µF, Unless Otherwise Specified)

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V _o	4.8V	5.0V	5.2V	T _J =25°C
		4.75V	5.0V	5.25V	7V ≤ V _i ≤ 20V, 5mA ≤ I _o ≤ 350mA, P _D =15W
Load Regulation	ΔV _o		15mV	100mV	5mA ≤ I _o ≤ 0.5A, T _J =25°C
			5.0mV	50mV	5mA ≤ I _o ≤ 200mA, T _J =25°C
Line regulation	ΔV _o		3.0mV	100mV	7V ≤ V _i ≤ 25V, I _o =0.2A
			1.0mV	50mV	8V ≤ V _i ≤ 25V, I _o =0.2A
Quiescent Current	I _q		4.2mA	6.0mA	T _J =25°C
Quiescent Current Change	ΔI _q			0.8mA	8V ≤ V _i ≤ 25V, I _o =0.2A
				0.5mA	5mA ≤ I _o ≤ 350mA
Output Noise Voltage	V _N		40µV	200µV	10Hz ≤ f ≤ 120Hz
Ripple Rejection	RR	62dB	80dB		8V ≤ V _i ≤ 18V f=120Hz, I _o =0.3A T _J =25°C
Dropout Voltage	V _d		2.0V	2.5V	I _o =0.35A, T _J =25°C
Output Short Circuit Current	I _{sc}		300mA		V _i =10V, T _J =25°C
Peak Output Current	I _{pk}		0.7A		T _J =25°C

TYPICAL APPLICATION



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		

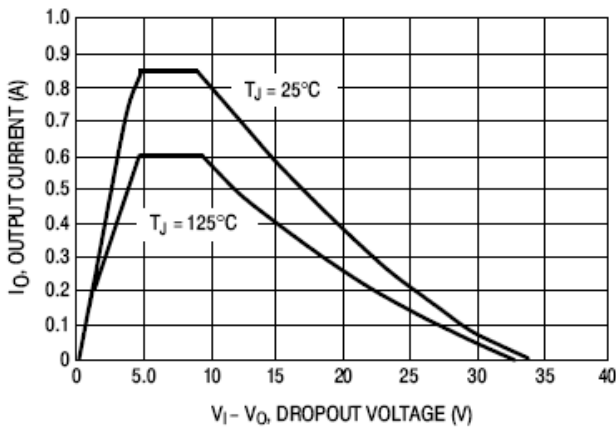


Figure 1. Peak Output Current versus Dropout Voltage

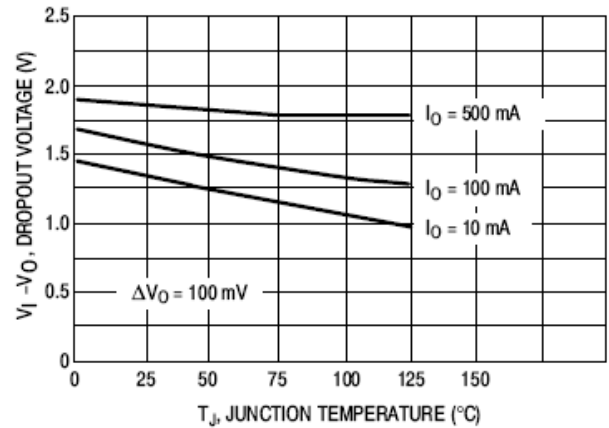


Figure 2. Dropout Voltage versus Junction Temperature

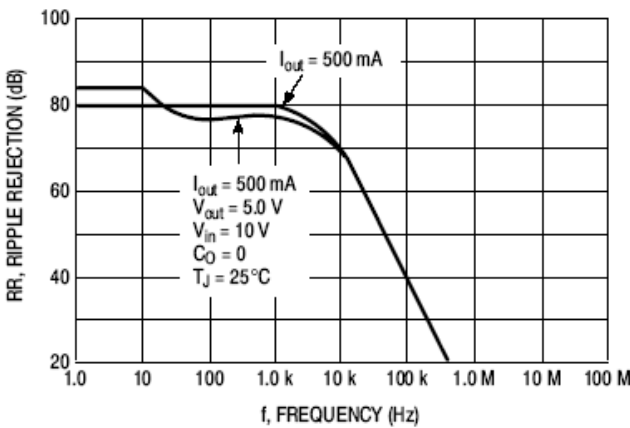


Figure 3. Ripple Rejection versus Frequency

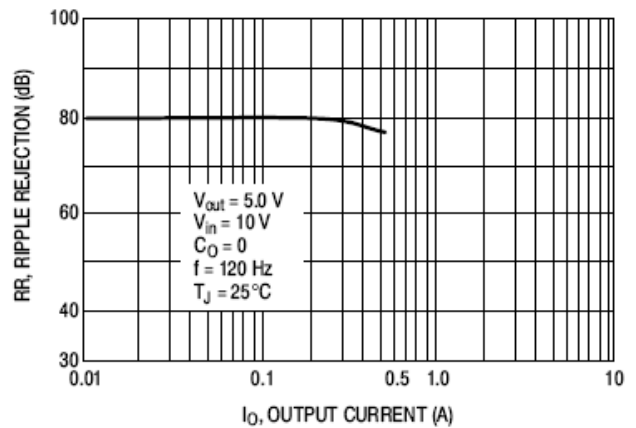


Figure 4. Ripple Rejection versus Output Current

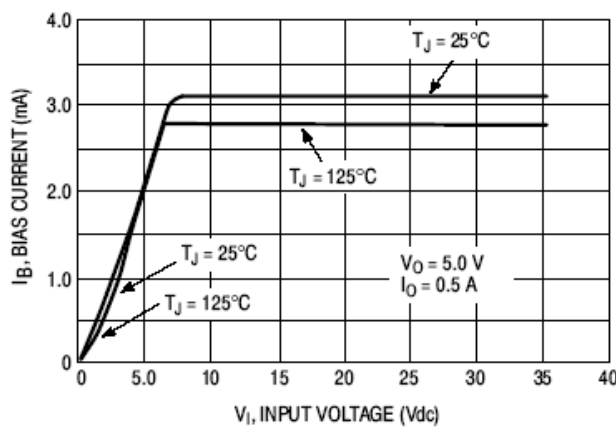


Figure 5. Bias Current versus Input Voltage

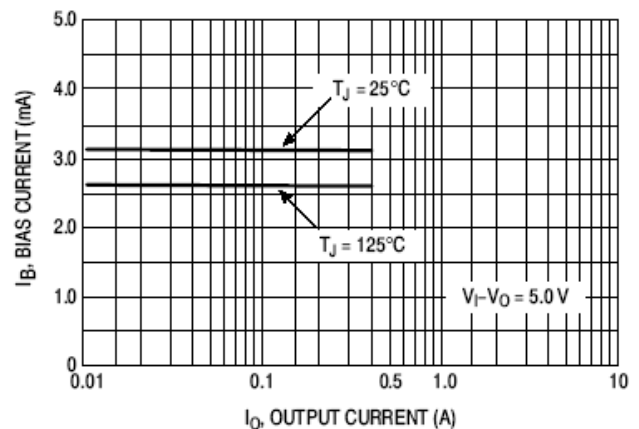


Figure 6. Bias Current versus Output Current



TM

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Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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