



Micro Commercial Components



Micro Commercial Components  
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## MC78M05CDT

### 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

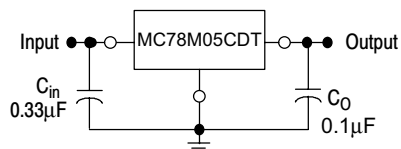
### Maximum Ratings @ $T_A=25^\circ\text{C}$ , Unless Otherwise Noted

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Power Dissipation	$P_D$	1.25	W
Operating Junction Temperature	$T_{OPR}$	0 --- +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65---+150	$^\circ\text{C}$

### Electrical Characteristics ( $V_i=10\text{V}$ , $I_o=350\text{mA}$ , $0^\circ\text{C}<T_J<125^\circ\text{C}$ , $C_i=0.33\mu\text{F}$ , $C_o=0.1\mu\text{F}$ , Unless Otherwise Specified)

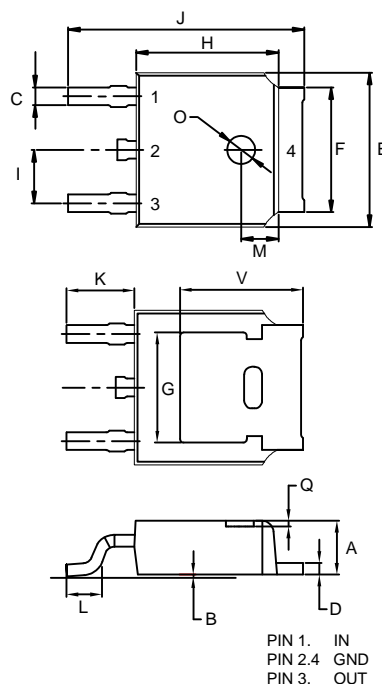
Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	$V_o$	4.8V	5.0V	5.2V	$T_J=25^\circ\text{C}$
		4.75V	5.0V	5.25V	$7\text{V} \leq V_i \leq 20\text{V}$ , $5\text{mA} \leq I_o \leq 350\text{mA}$ , $P_D=15\text{W}$
Load Regulation	$\Delta V_o$		15mV	100mV	$5\text{mA} \leq I_o \leq 0.5\text{A}$ , $T_J=25^\circ\text{C}$
			5.0mV	50mV	$5\text{mA} \leq I_o \leq 200\text{mA}$ , $T_J=25^\circ\text{C}$
Line regulation	$\Delta V_o$		3.0mV	100mV	$7\text{V} \leq V_i \leq 25\text{V}$ , $I_o=0.2\text{A}$
			1.0mV	50mV	$8\text{V} \leq V_i \leq 25\text{V}$ , $I_o=0.2\text{A}$
Quiescent Current	$I_q$		4.2mA	6.0mA	$T_J=25^\circ\text{C}$
Quiescent Current Change	$\Delta I_q$			0.8mA 0.5mA	$8\text{V} \leq V_i \leq 25\text{V}$ , $I_o=0.2\text{A}$ $5\text{mA} \leq I_o \leq 350\text{mA}$
Output Noise Voltage	$V_N$		40 $\mu\text{V}$	200 $\mu\text{V}$	$10\text{Hz} \leq f \leq 120\text{Hz}$
Ripple Rejection	RR	62dB	80dB		$8\text{V} \leq V_i \leq 18\text{V}$ $f=120\text{Hz}$ , $I_o=0.3\text{A}$ $T_J=25^\circ\text{C}$
Dropout Voltage	$V_d$		2.0V	2.5V	$I_o=0.35\text{A}$ , $T_J=25^\circ\text{C}$
Output Short Circuit Current	$I_{SC}$		300mA		$V_i=10\text{V}$ , $T_J=25^\circ\text{C}$
Peak Output Current	$I_{pk}$		0.7A		$T_J=25^\circ\text{C}$

### TYPICAL APPLICATION



## Three-Terminal Positive Voltage Regulators

### DPAK



DIMENSIONS					
DIM	INCHES		MM		NOTE
	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		

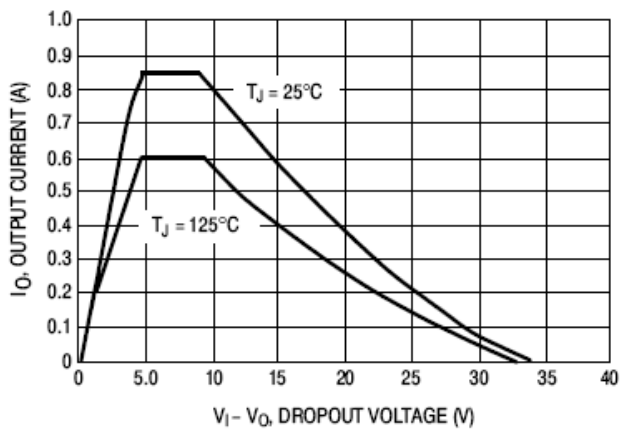


Figure 1. Peak Output Current versus Dropout Voltage

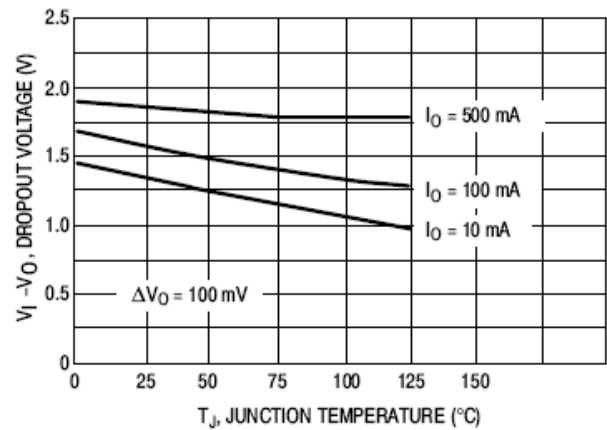


Figure 2. Dropout Voltage versus Junction Temperature

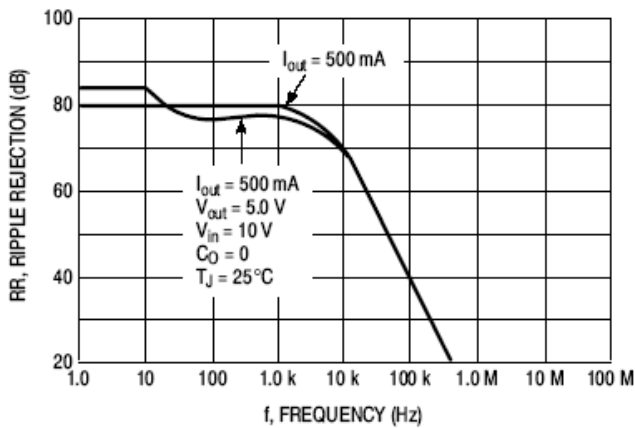


Figure 3. Ripple Rejection versus Frequency

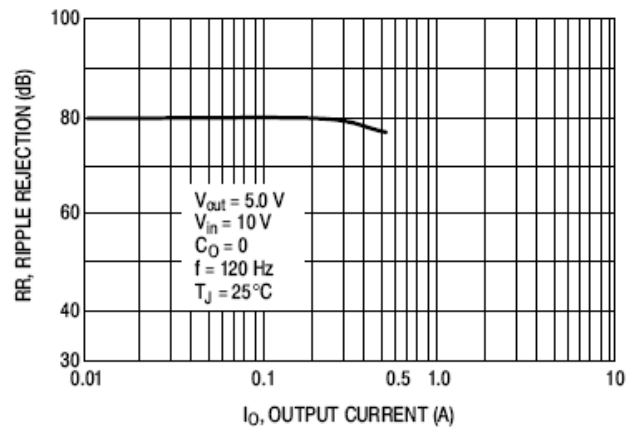


Figure 4. Ripple Rejection versus Output Current

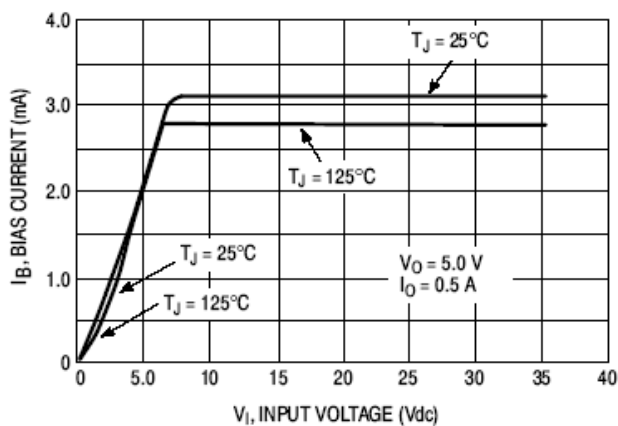


Figure 5. Bias Current versus Input Voltage

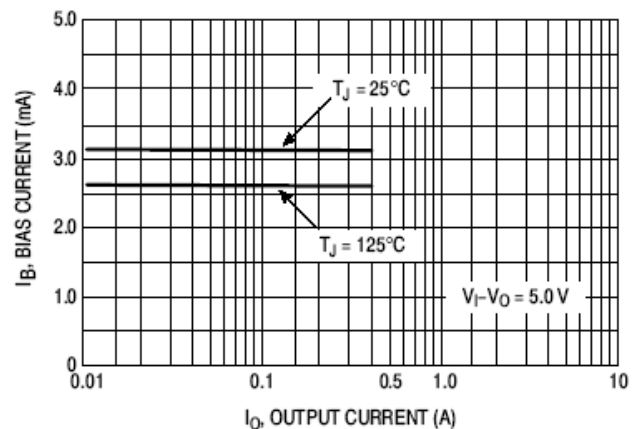


Figure 6. Bias Current versus Output Current

## 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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