



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

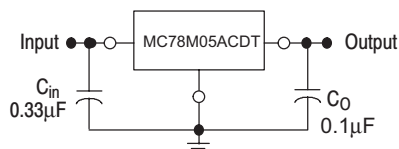
Maximum Ratings @ $T_A=25^\circ\text{C}$, Unless Otherwise Noted

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)

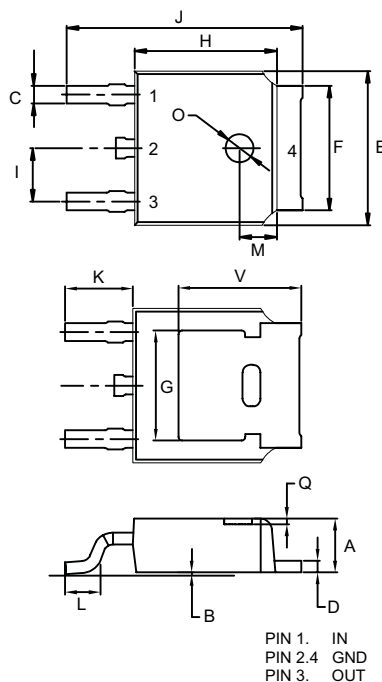
Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V_o	4.9V	5.0V	5.1V	$T_J=25^\circ\text{C}$
		4.85V	5.0V	5.15V	$7\text{V} \leq V_i \leq 20\text{V}$, $5\text{mA} \leq I_o \leq 350\text{mA}$, $P_D=15\text{W}$
Load Regulation	ΔV_o		15mV	100mV	$5\text{mA} \leq I_o \leq 0.5\text{A}$, $T_J=25^\circ\text{C}$
			5.0mV	50mV	$5\text{mA} \leq I_o \leq 200\text{mA}$, $T_J=25^\circ\text{C}$
Line regulation	ΔV_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	ΔI_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 μV	200 μV	10Hz $\leq f \leq$ 120Hz
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		

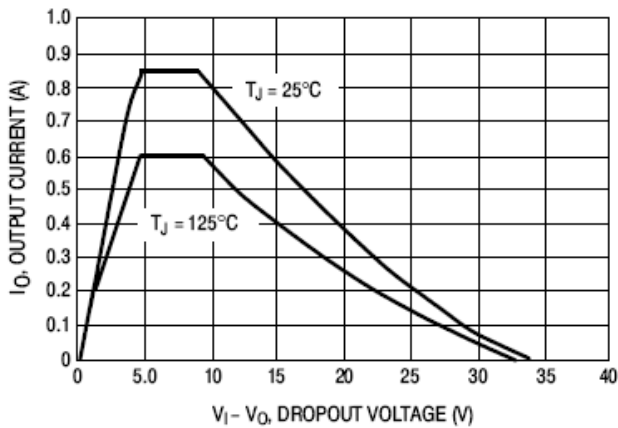


Figure 1. Peak Output Current versus Dropout Voltage

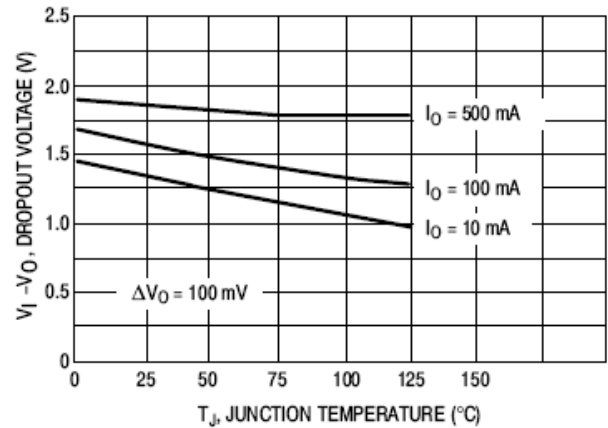


Figure 2. Dropout Voltage versus Junction Temperature

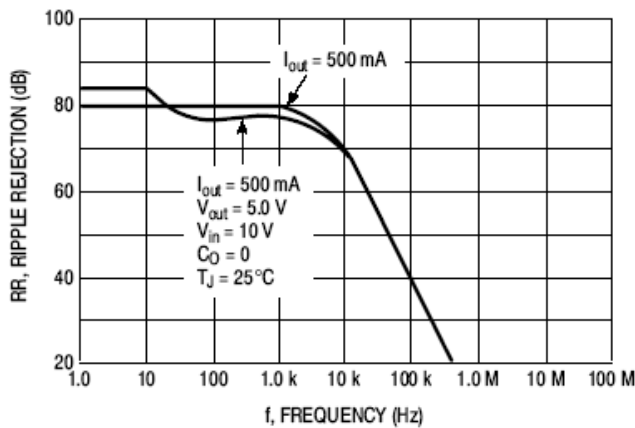


Figure 3. Ripple Rejection versus Frequency

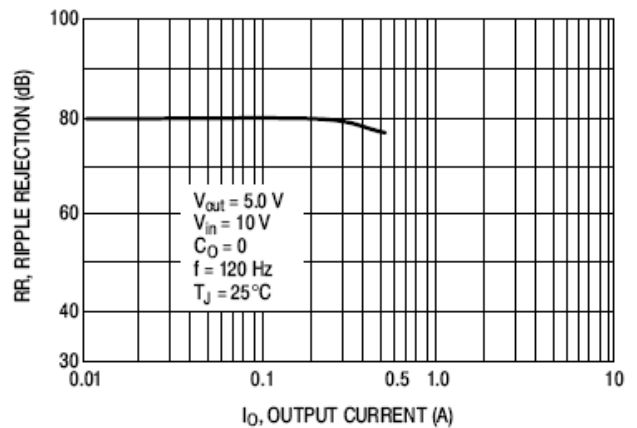


Figure 4. Ripple Rejection versus Output Current

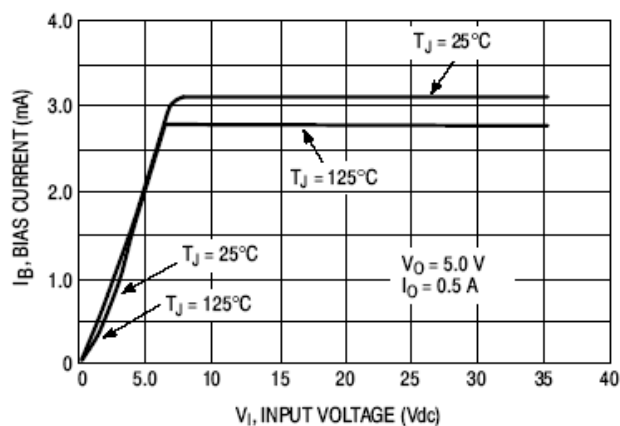


Figure 5. Bias Current versus Input Voltage

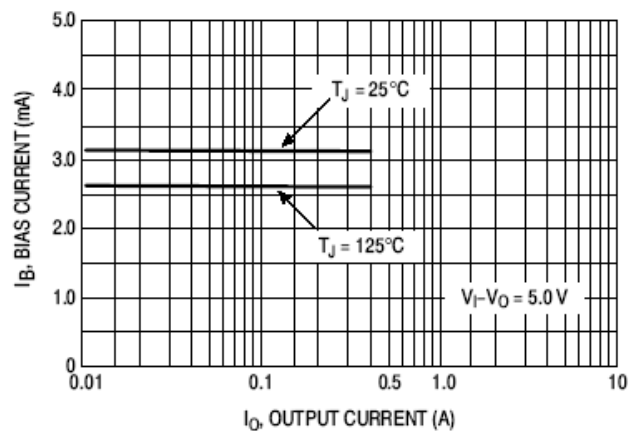


Figure 6. Bias Current versus Output Current

Ordering Information :

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

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