

Features

- Output Current in Excess of 0.5 Ampere
- Internal Thermal Overload Protection
- Internal Short-circuit Current Limiting
- High Power Dissipation Capability
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

Maximum Ratings

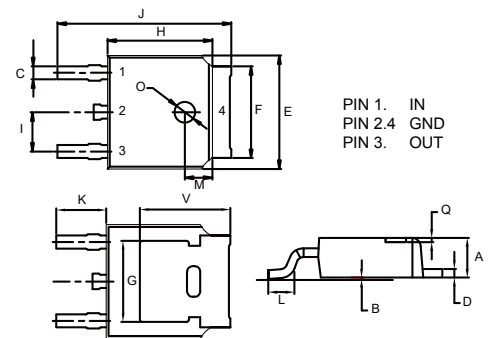
Parameter	Symbol	Value	Unit
Input Voltage	V_I	35	V
Power Dissipation	P_D	1.25	W
Operating Junction Temperature $T_{OJ}^* \wedge$	T_{OPR}	0~125	°C
Storage Temperature Range	T_{STG}	-65~125	°C
Thermal Resistance junction to Ambient	$R_{\theta JA}$	100	°C/W

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Three-Terminal Positive Voltage Regulators

DPAK(TO-252)



DIMENSIONS

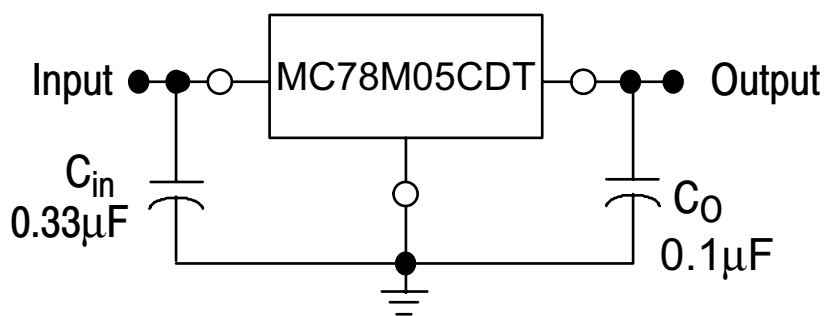
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		TYP.
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		TYP.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

Electrical Characteristics

($V_i=10V$, $I_o=350mA$, $0^\circ C < T_j < 125^\circ C$, $C_i=0.33\mu F$, $C_o=0.1\mu F$, Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_j=25^\circ C$	4.8	5.0	5.2	V
		$7V \leq V_i \leq 20V$, $5mA \leq I_o \leq 350mA$, $P_D=15W$	4.75	5.0	5.25	V
Load Regulation	ΔV_o	$5mA \leq I_o \leq 500mA$, $T_j=25^\circ C$	-	15	100	mV
		$5mA \leq I_o \leq 200mA$, $T_j=25^\circ C$	-	5.0	50	mV
Line Regulation	ΔV_o	$7.0V \leq V_i \leq 25V$, $I_o=0.5A$	-	3.0	100	mV
		$8.0V \leq V_i \leq 25V$, $I_o=0.5A$	-	1.0	50	mV
Quiescent Current	I_q	$T_j=25^\circ C$	-	4.2	6.0	mA
Quiescent Current Change	ΔI_q	$8V \leq V_i \leq 25V$, $I_o=200mA$, $5mA \leq I_o \leq 350mA$	-	-	0.8	mA
			-	-	0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 120Hz$	-	40	200	μV
Ripple Rejection	RR	$8V \leq V_i \leq 18V$, $f=120Hz$, $I_o=0.3A$, $T_j=25^\circ C$	62	80	-	dB
Dropout Voltage	V_d	$I_o=0.35A$, $T_j=25^\circ C$	-	2.0	2.5	V
Output Short Circuit Current	I_{sc}	$V_i=10V$, $T_j=25^\circ C$	-	300	-	mA
Peak Output Current	I_{PK}	$T_j=25^\circ C$	-	0.7	-	A

Typical Application



Curve Characteristics

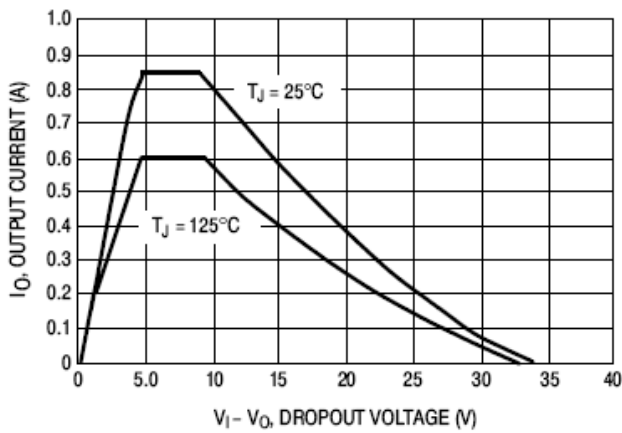


Figure 1. Peak Output Current versus Dropout Voltage

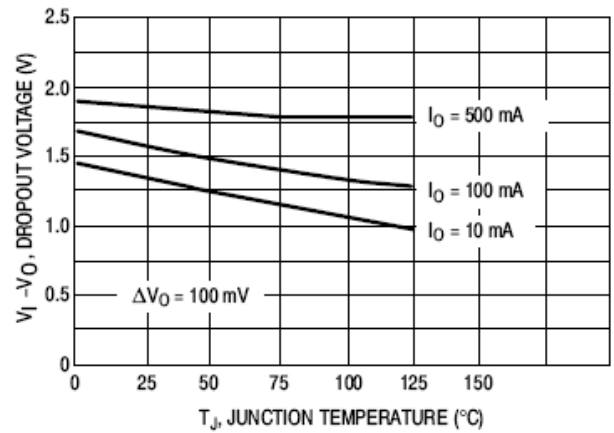


Figure 2. Dropout Voltage versus Junction Temperature

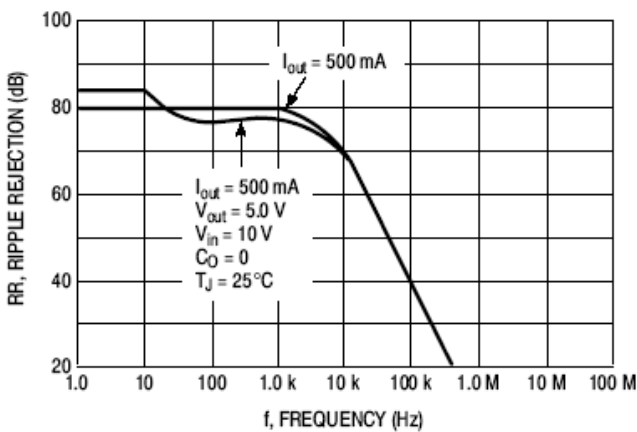


Figure 3. Ripple Rejection versus Frequency

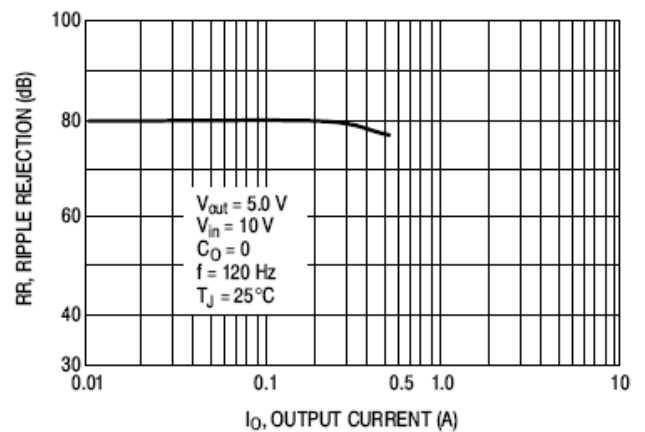


Figure 4. Ripple Rejection versus Output Current

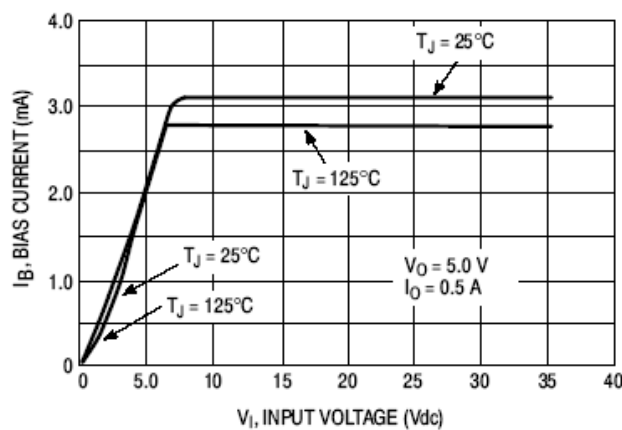


Figure 5. Bias Current versus Input Voltage

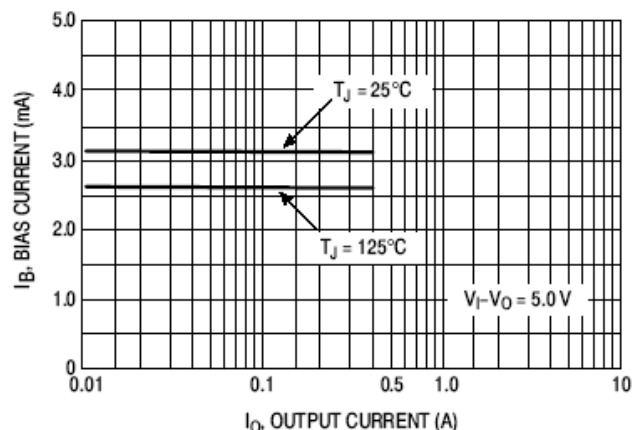


Figure 6. Bias Current versus Output Current