



Micro Commercial Components™

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# MC78M12ACDT

## Features

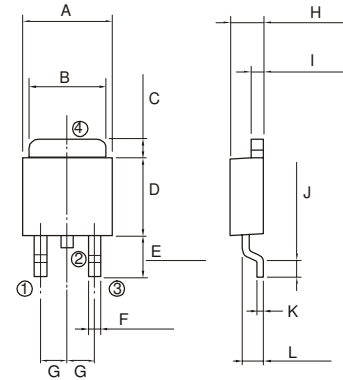
- Output current in excess of 0.5 Ampere
- Internal thermal overload protection
- Internal short-circuit current limiting
- High power dissipation capability

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

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

## Three-Terminal Positive Voltage Regulators

### DPAK



① :IN  
② ④ :GND  
③ :OUT

### Electrical Characteristics (V<sub>i</sub>=19V, 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>	11.76V	12V	12.24V	T <sub>j</sub> =25°C
		11.66V	12V	12.34V	14.5V ≤ V <sub>i</sub> ≤ 27V, 5mA ≤ I <sub>o</sub> ≤ 350mA, P <sub>D</sub> ≤ 15W
Load Regulation	ΔV <sub>o</sub>		25mV	240mV	5mA ≤ I <sub>o</sub> ≤ 0.5A, T <sub>j</sub> =25°C
			10mV	120mV	5mA ≤ I <sub>o</sub> ≤ 200mA, T <sub>j</sub> =25°C
Line regulation	ΔV <sub>o</sub>		10mV 3.0mV	100mV 50mV	14.5V ≤ V <sub>i</sub> ≤ 30V, I <sub>o</sub> =0.2A 16V ≤ V <sub>i</sub> ≤ 30V, I <sub>o</sub> =0.2A
Quiescent Current	I <sub>q</sub>		4.6mA	6.0mA	T <sub>j</sub> =25°C
Quiescent Current Change	ΔI <sub>q</sub>			0.8mA 0.5mA	14.5V ≤ V <sub>i</sub> ≤ 30V, I <sub>o</sub> =0.2A 5mA ≤ I <sub>o</sub> ≤ 350mA
Output Noise Voltage	V <sub>N</sub>		75μV		10Hz ≤ f ≤ 100Hz
Ripple Rejection	RR		55dB	80dB	15V ≤ V <sub>i</sub> ≤ 25V f=120Hz, I <sub>o</sub> =0.3A T <sub>j</sub> =25°C
Dropout Voltage	V <sub>d</sub>		2.0V		I <sub>o</sub> =0.35A, T <sub>j</sub> =25°C
Output Short Circuit Current	I <sub>sc</sub>		240mA		V <sub>i</sub> =19V, T <sub>j</sub> =25°C
Peak Output Current	I <sub>pk</sub>		0.7A		T <sub>j</sub> =25°C

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.248	.364	6.3	6.7	
B	.200	.216	5.1	5.5	
C	.047	.063	1.2	1.6	
D	.209	.225	5.3	5.7	
E	.090	.106	2.3	2.7	
F	.012	.032	0.3	0.8	
G	.090		2.3		
H	.082	.098	2.1	2.5	
I	.016	.024	0.4	0.6	
J	.040	---	1.0	---	
K	.020		0.5		
L	.051	.071	1.3	1.8	

### TYPICAL APPLICATION

