

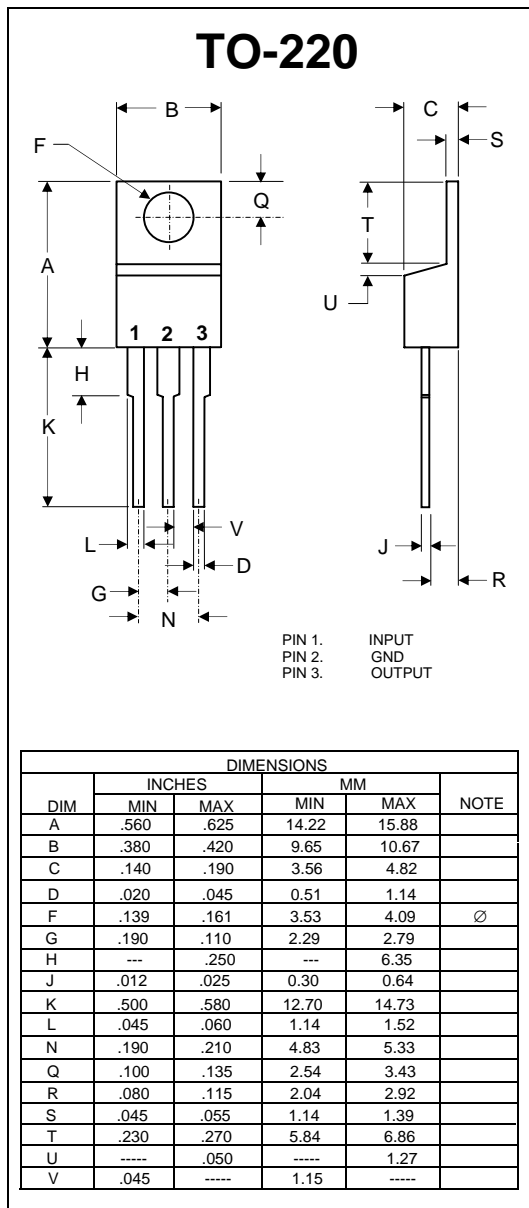


**THE DATASHEET OF  
MC7806CT-BP**



# MC7806CT

## Three-Terminal Positive Voltage Regulators



### Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Output current in excess of 1.0 Ampere
- No external components required
- Internal thermal overload protection
- Internal short-circuit current limiting
- Output voltage offered in 2% tolerance
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Mounting Torque: 5 in-lbs Maximum

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

Parameter	Symbol	Value	Unit
Input Voltage	V <sub>I</sub>	30	V
Operating Ambient Temperature	P <sub>D</sub>	15	W
Operating Junction Temperature	T <sub>OPR</sub>	-20---+75	°C
Storage Temperature Range	T <sub>STG</sub>	-55---+125	°C

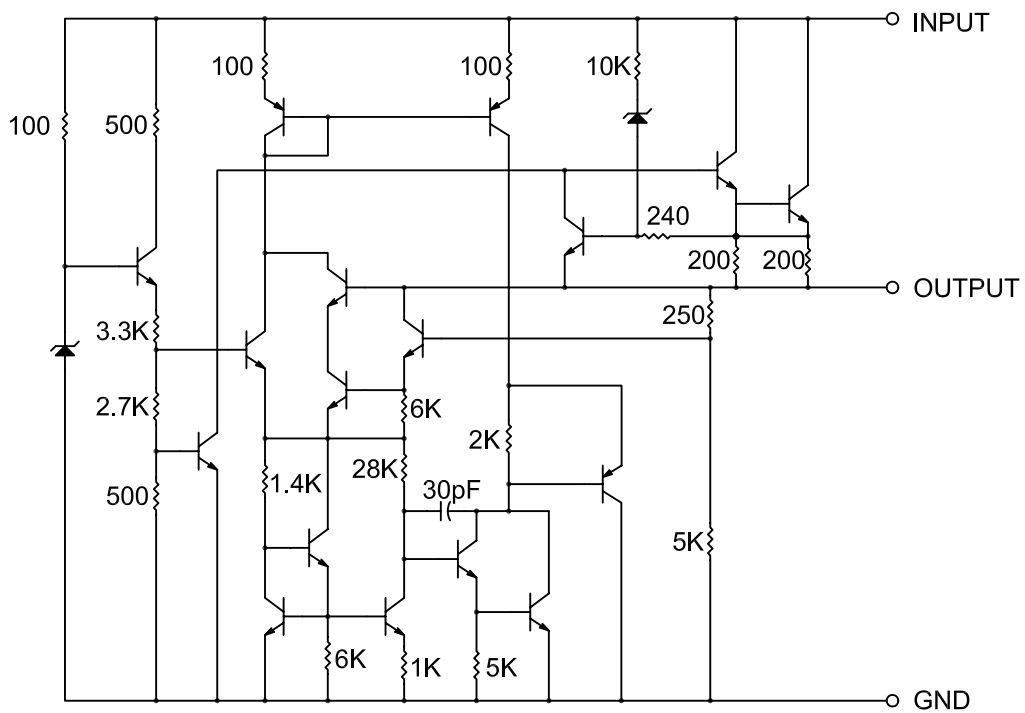
### Electrical Characteristics (V<sub>I</sub>=11V, I<sub>O</sub>=500mA, 0°C<T<sub>J</sub><125°C, C<sub>i</sub>=0.33uF, C<sub>o</sub>=0.1uF, Unless Otherwise Specified)

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V <sub>O</sub>	5.88V	6.0V	6.12V	T <sub>J</sub> =25°C
		5.83V		6.17V	8V ≤ V <sub>I</sub> ≤ 21V, 5mA ≤ I <sub>O</sub> ≤ 1.0A, P <sub>D</sub> =15W
Load Regulation	ΔV <sub>O</sub>		14mV	120mV	5mA ≤ I <sub>O</sub> ≤ 1.5A, T <sub>J</sub> =25°C,
			4.0mV	60mV	250mA ≤ I <sub>O</sub> ≤ 750mA, T <sub>J</sub> =25°C
Line regulation	ΔV <sub>O</sub>		5.0mV	120mV	8V ≤ V <sub>I</sub> ≤ 25V, T <sub>J</sub> =25°C
			1.5mV	60mV	9V ≤ V <sub>I</sub> ≤ 13V, T <sub>J</sub> =25°C
Quiescent Current	I <sub>q</sub>		4.3mA	8.0mA	T <sub>J</sub> =25°C, I <sub>O</sub> =0
Quiescent Current Change	ΔI <sub>q</sub>			1.3mA 0.5mA	7V ≤ V <sub>I</sub> ≤ 25V 5mA ≤ I <sub>O</sub> ≤ 1.0A
Output Noise Voltage	V <sub>N</sub>		45μV		10Hz ≤ f ≤ 100KHz T <sub>J</sub> =25°C
Ripple Rejection	RR	59dB	75dB		f=120Hz
Dropout Voltage	V <sub>d</sub>		2.0V		I <sub>O</sub> =1.0A, T <sub>J</sub> =25°C
Output Short Circuit Current	R <sub>O</sub>		19mohm		f=1.0KHz
Output Short Circuit Current	I <sub>OS</sub>		550mA		T <sub>J</sub> =25°C
Peak Output Current	I <sub>Opeak</sub>		2.2A		T <sub>J</sub> =25°C
Temperature Coefficient of Output voltage	ΔV <sub>O</sub> /ΔT <sub>J</sub>		0.8mV/°C		0°C ≤ T <sub>J</sub> ≤ 125°C, I <sub>O</sub> =5mA

Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

# MC7806CT

## Representation Schematic Diagram





Micro Commercial Components

### Ordering Information :

Device	Packing
Part Number-BP	Bulk; 1Kpcs/Box

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

#### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

#### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.



#### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

[www.mccsemi.com](http://www.mccsemi.com)

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View MC7806CT-BP on WIN SOURCE](#)
-  [Micro Commercial Co](#) Information

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management