

## Features

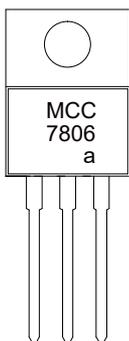
- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- No External Components Required
- Output Voltage Offered in 2% Tolerance
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note1) ("P" Suffix Designates RoHS Compliant. See ordering information)

## Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	$V_I$	30	V
Output Current	$I_o$	1.0	A
Power Dissipation	$P_D$	15	W
Operating Junction Temperature $(\theta_{JA})^* \wedge$	$T_{OPR}$	-20~75	°C
Storage Temperature Range	$T_{STG}$	-55~125	°C

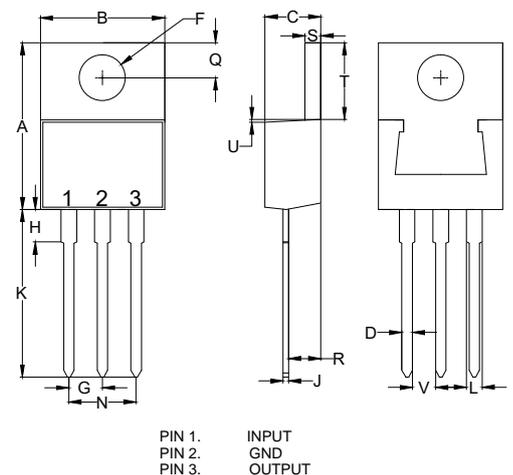
Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

## Marking Code



# Three-Terminal Positive Voltage Regulators

## TO-220



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
B	0.380	0.420	9.65	10.67	
C	0.140	0.190	3.56	4.82	
D	0.020	0.045	0.51	1.14	
F	0.139	0.161	3.53	4.09	Φ
G	0.090	0.110	2.29	2.79	
H	-----	0.250	-----	6.35	
J	0.012	0.025	0.30	0.64	
K	0.500	0.580	12.70	14.73	
L	0.045	0.060	1.14	1.52	
N	0.190	0.210	4.83	5.33	
Q	0.100	0.135	2.54	3.43	
R	0.080	0.115	2.04	2.92	
S	0.045	0.055	1.14	1.39	
T	0.230	0.270	5.84	6.86	
U	-----	0.050	-----	1.27	
V	0.045	-----	1.15	-----	

**Electrical Characteristics**

( $V_i=11V$ ,  $I_o=500mA$ ,  $0^{\circ}C < T_j < 125^{\circ}C$ ,  $C_i=0.33\mu F$ ,  $C_o=0.1\mu F$ , Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$T_j=25^{\circ}C$	5.88	6.0	6.12	V
		$8V \leq V_i \leq 21V, 5mA \leq I_o \leq 1000mA, P_D=15W$	5.83	-	6.17	V
Load Regulation	$\Delta V_o$	$5mA \leq I_o \leq 1500mA, T_j=25^{\circ}C$	-	14.0	120	mV
		$250mA \leq I_o \leq 750mA, T_j=25^{\circ}C$	-	4.0	60	mV
Line Regulation	$\Delta V_o$	$8.0V \leq V_i \leq 25V, T_j=25^{\circ}C$	-	5.0	120	mV
		$9.0V \leq V_i \leq 13V, T_j=25^{\circ}C$	-	1.5	60	mV
Quiescent Current	$I_q$	$T_j=25^{\circ}C, I_o=0$	-	4.3	8.0	mA
Quiescent Current Change	$\Delta I_q$	$7V \leq V_i \leq 25V,$	-	-	1.3	mA
		$5mA \leq I_o \leq 1000mA$	-	-	0.5	mA
Output Noise Voltage	$V_N$	$10Hz \leq f \leq 100KHz, T_j=25^{\circ}C$	-	45	-	$\mu V$
Ripple Rejection	RR	$f=120Hz$	59	75	-	dB
Dropout Voltage	$V_d$	$T_j=25^{\circ}C, I_o=1.0A$	-	2	-	V
Output Short Circuit Current	$R_o$	$f=1.0KHz$	-	19	-	mohm
Output Short Circuit Current	$I_{OS}$	$T_j=25^{\circ}C$	-	550	-	mA
Peak Output Current	$I_{opeak}$	$T_j=25^{\circ}C$	-	2.2	-	A
Temperature Coefficient of Output Voltage	$\Delta V_o/\Delta T_j$	$0^{\circ}C \leq T_j \leq 125^{\circ}C, I_o=5.0mA$	-	0.8	-	$mV/^{\circ}C$



## Ordering Information

Device	Packing
Part Number-BP	Bulk:50pcs/Tube, 1Kpcs/Box, 5Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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