



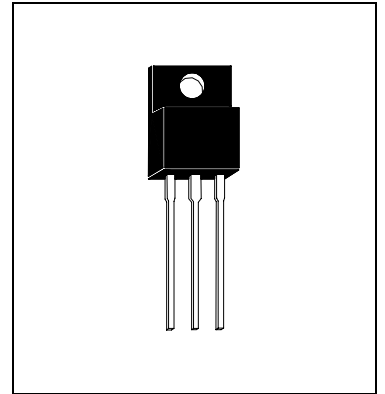
H7912AF

H7912BF

3-TERMINAL POSITIVE VOLTAGE REGULATOR

Description

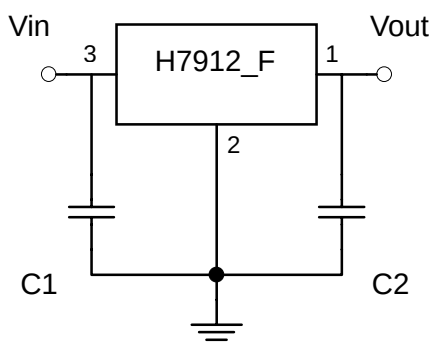
The H7912_F series of three-terminal negative regulators are available in the TO-220FP package and with several fixed output voltages. They can provide local on-card regulation, eliminating the distribution problems associated with single point regulation; furthermore, having the same voltage options as the H7912_F positive standard series, they are particularly suited for split power supplies. If adequate heat sinking is provided, the H7912_F series can deliver an output current in excess of 1A although designed primarily as fixed voltage regulators, these devices can be used with external components to obtain adjustable voltage and currents.



Absolute Maximum Ratings (Ta=25°C)

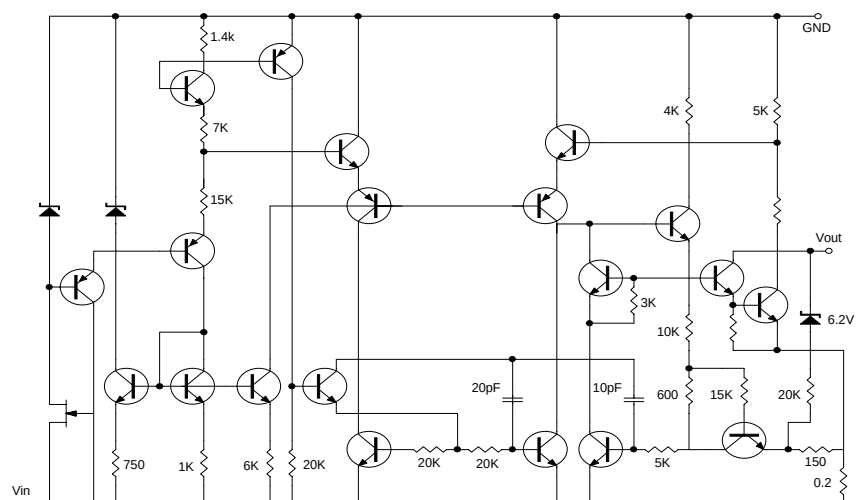
- Input Voltage..... -35V(-5V Through -15V), 40V(-24V)
- Total Power DissipationInternal limit
- Operating Junction Temperature0°C to +125°C
- Maximum Junction Temperature.....125°C
- Storage Temperature Range-55°C to +150°C
- Lead Temperature (Soldering 10S).....230°C

Typical Application



Note :
By pass Capacitors are recommended for optimum stability and transient response and should be locate as close as possible to the regulator.

Schematic Diagram





Electrical Characteristics

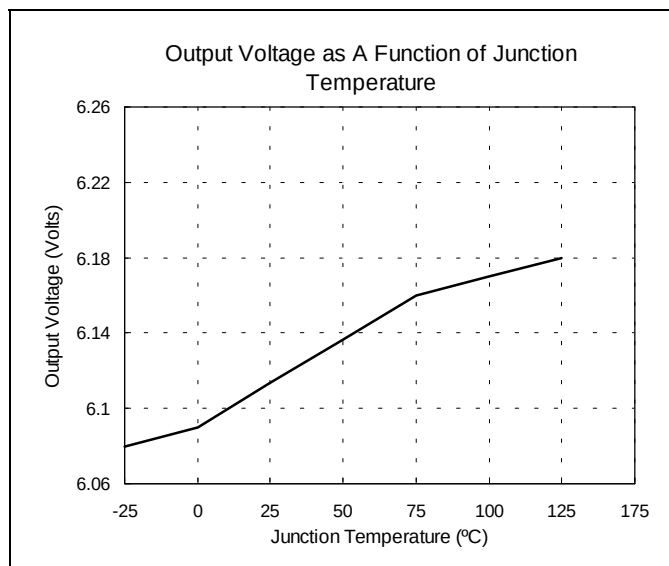
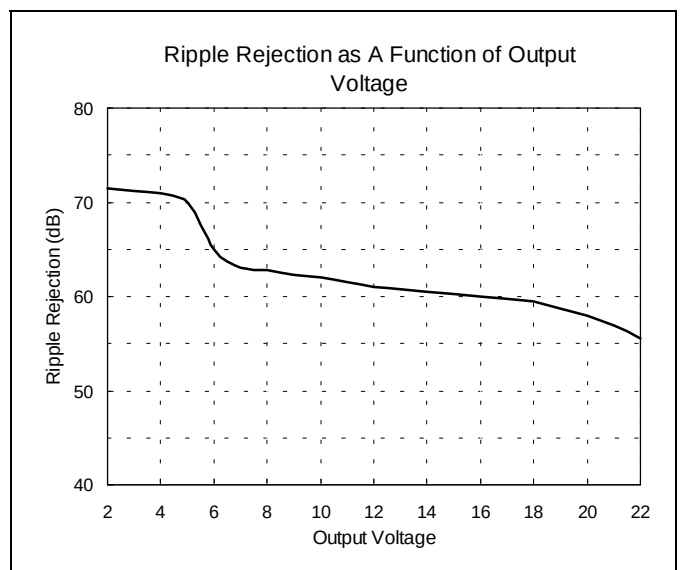
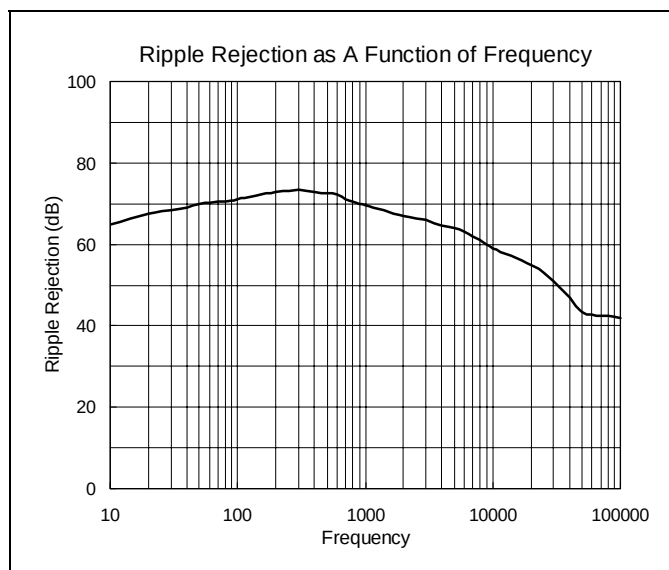
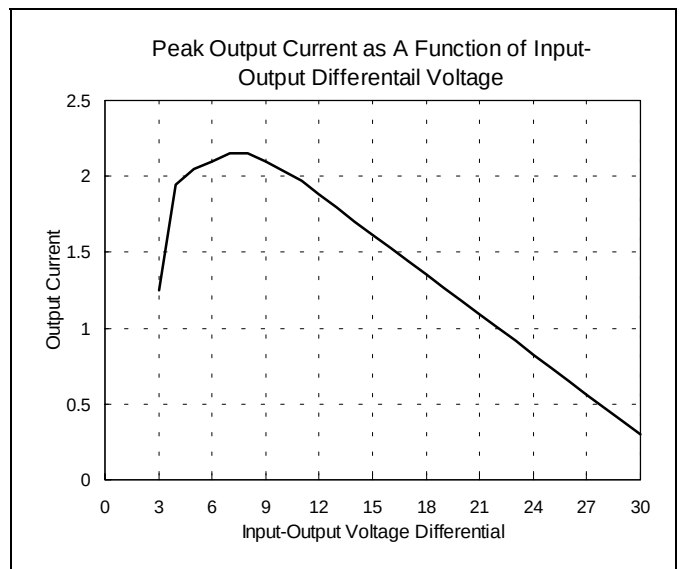
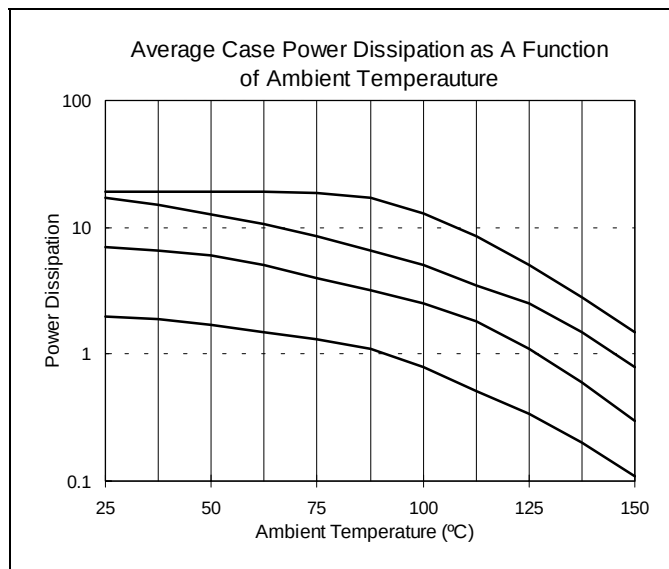
$V_{in} = -19V$, $I_o = 500mA$, $C_{in} = 2.2\mu F$, $C_{out} = 1\mu F$, $0^\circ C \leq T_j \leq 125^\circ C$ (unless otherwise noted)

Symbol	Parameter	Conditions	H7912AF			Units
			Min	Typ	Max	
V_o	Output Voltage	$T_j = 25^\circ C$	-11.64	-12	-12.36	V
		$PD \leq 15W$, $5mA \leq I_o \leq 1A$ $V_i = -14.5V$ to $-27V$	-11.58	-12	-12.42	
ΔV_o	Line Regulation	$T_j = 25^\circ C$, $-14.5V \leq V_{in} \leq -30V$	-	-	120	mV
		$T_j = 25^\circ C$, $-16V \leq V_{in} \leq 22V$	-	-	30	
ΔV_o	Load Regulation	$5mA \leq I_o \leq 1.5A$	-	-	150	mV
		$250mA \leq I_o \leq 750mA$	-	-	75	
I_Q	Quiescent Current	$I_o \leq 1A$, $T_j = 25^\circ C$	-	3	8	mA
ΔI_Q	Quiescent Current Change	$5mA \leq I_o \leq 1A$	-	-	0.5	mA
		$-14.5V \leq V_{in} \leq -30V$	-	-	1.3	
$\Delta V_o / \Delta T$	Output Voltage Drift	$I_o = 5mA$	-	-0.4	-	mV/ $^\circ C$
V_n	Output Noise Voltage	$T_a = 25^\circ C$, 10Hz to 100KHz	-	100	-	μV
RR	Ripple Rejection	$\Delta V_i = 10V$, $f = 120Hz$	54	68	-	dB
VD	Dropout Voltage	$T_j = 25^\circ C$, $I_o = 1A$	-	2	-	V
Isc	Short Circuit Current	$T_j = 25^\circ C$, $V_i = -35V$	-	2.2	-	A
Ipk	Peak Output Current	$T_j = 25^\circ C$	1.3	2.2	-	A

Symbol	Parameter	Conditions	H7912BF			Units
			Min	Typ	Max	
V_o	Output Voltage	$T_j = 25^\circ C$	-11.5	-12	-12.5	V
		$PD \leq 15W$, $5mA \leq I_o \leq 1A$ $V_i = -14.5V$ to $-27V$	-11.4	-12	-12.6	
ΔV_o	Line Regulation	$T_j = 25^\circ C$, $-14.5V \leq V_{in} \leq -30V$	-	10	240	mV
		$T_j = 25^\circ C$, $-16V \leq V_{in} \leq 22V$	-	5	120	
ΔV_o	Load Regulation	$5mA \leq I_o \leq 1.5A$	-	-	240	mV
		$250mA \leq I_o \leq 750mA$	-	-	120	
I_Q	Quiescent Current	$I_o \leq 1A$, $T_j = 25^\circ C$	-	3	8	mA
ΔI_Q	Quiescent Current Change	$5mA \leq I_o \leq 1A$	-	-	0.5	mA
		$-14.5V \leq V_{in} \leq -30V$	-	-	1.3	
$\Delta V_o / \Delta T$	Output Voltage Drift	$I_o = 5mA$	-	-0.4	-	mV/ $^\circ C$
V_n	Output Noise Voltage	$T_a = 25^\circ C$, 10Hz to 100KHz	-	100	-	μV
RR	Ripple Rejection	$\Delta V_i = 10V$, $f = 120Hz$	54	68	-	dB
VD	Dropout Voltage	$T_j = 25^\circ C$, $I_o = 1A$	-	2	-	V
Isc	Short Circuit Current	$T_j = 25^\circ C$, $V_i = -35V$	-	2.2	-	A
Ipk	Peak Output Current	$T_j = 25^\circ C$	1.3	2.2	-	A

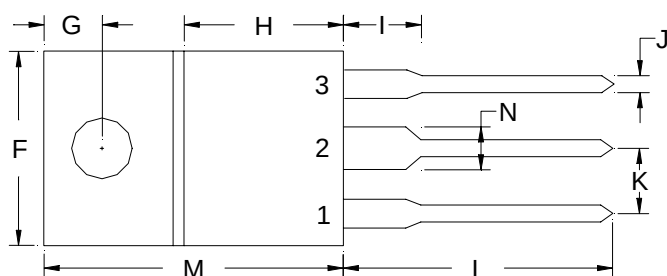
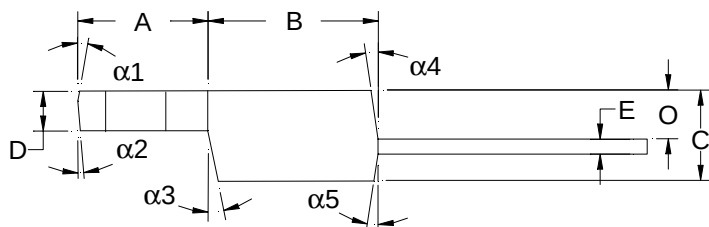


Characteristics Curve



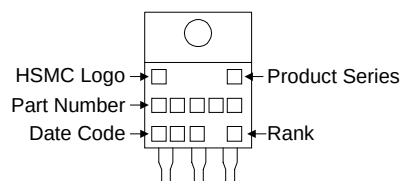


TO-220FP Dimension



3-Lead TO-220FP Plastic Package
HSMC Package Code : F

Marking :



Style : Pin 1. Ground 2. Vin 3. Vout

*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.2480	0.2520	6.30	6.40	K	-	*0.1004	-	*2.55
B	0.3386	0.3425	8.60	8.70	L	0.5118	0.5906	13.00	15.00
C	0.1673	0.1870	4.25	4.75	M	0.5886	0.5925	14.95	15.05
D	0.1043	0.1083	2.65	2.75	N	-	*0.0669	-	*1.70
E	0.0230	0.0242	0.58	0.61	O	0.1098	0.1114	2.79	2.83
F	0.3980	0.4039	10.11	10.26	1	-	-2°	-	*2°
G	0.1083	0.1122	2.75	2.85	2	-	*5°	-	*5°
H	0.3386	0.3425	8.60	8.70	3	-	*15°	-	*15°
I	-	*0.1496	-	*3.80	4	-	*5°	-	*5°
J	-	*0.0236	-	*0.60	5	-	*5°	-	*5°

Notes : 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.

2.Controlling dimension : millimeters.

3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.

4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

Material :

- Lead : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0

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