

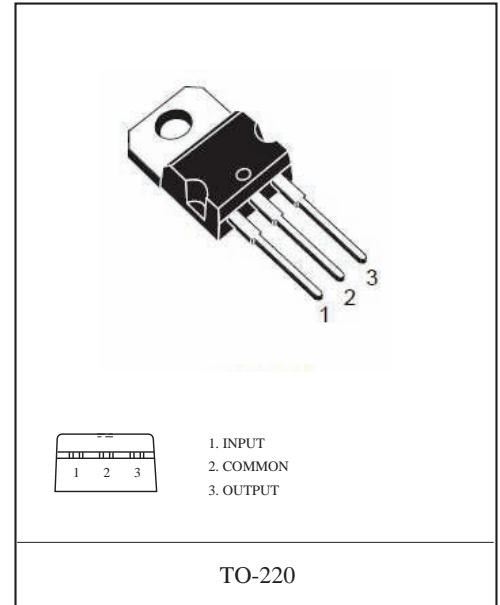
### THREE TERMINAL POSITIVE VOLTAGE REGULATORS

#### FEATURES

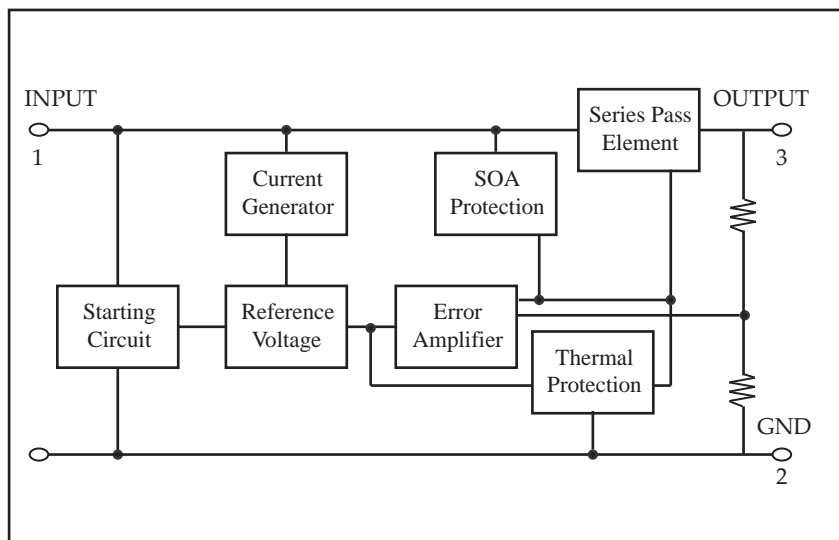
- Suitable for C-MOS, TTL, the Other Digital IC's Power Supply.
- Internal Thermal Overload Protection.
- Internal Short Circuit Current Limiting.
- Output Transition SOA Protection
- Output Voltages of 15V.
- Output Current in Excess of 1.2A.
- Satisfies IEC-65 Specification. (International Electronical Commission).

#### MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Input Voltage	$V_{IN}$	35	V
Power Dissipation (Tc=25°C)	$P_D$ (TO-220AB)	20.8	W
Power Dissipation (Without Heatsink)	$P_D$ (TO-220AB)	1.5	W
Operating Junction Temperature	$T_j$	0 ~ 125	°C
Storage Temperature	$T_{stg}$	-65 ~ 150	°C



#### BLOCK DIAGRAM





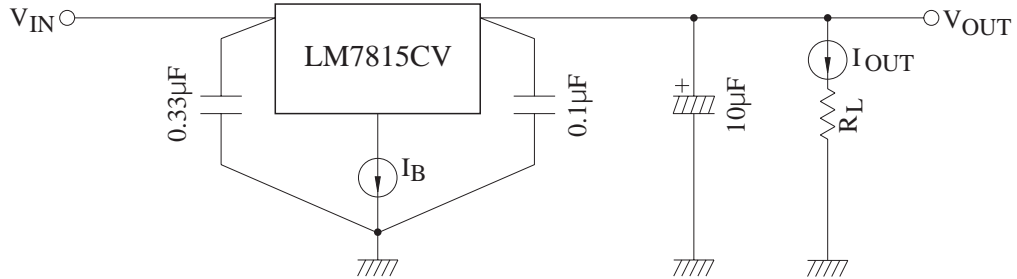
# LM7815CV

LM7815CV

ELECTRICAL CHARACTERISTICS ( $V_{IN}=23V$ ,  $I_{OUT}=500mA$ ,  $0^{\circ}C \leq T_j \leq 125^{\circ}C$ )

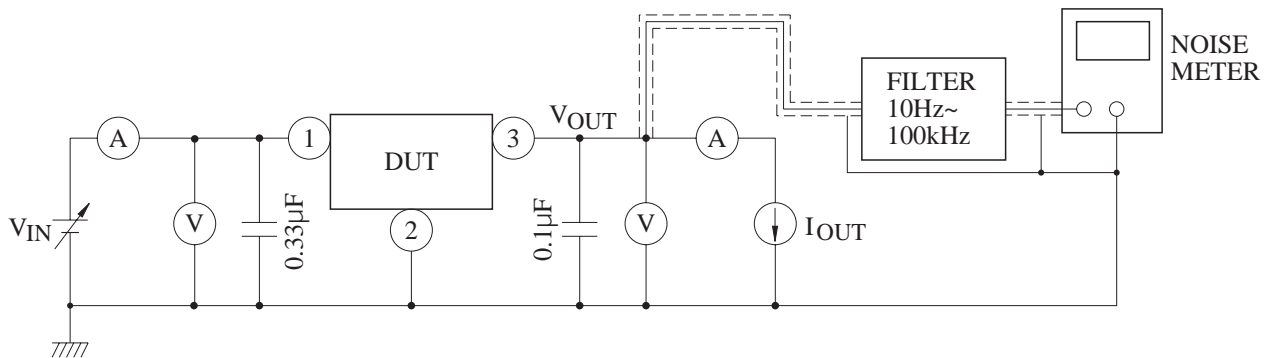
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Output Voltage	$V_{OUT}$	1	$T_j=25^{\circ}C$	14.25	15.0	15.75	V	
			$18.5V \leq V_{IN} \leq 30V$ $5.0mA \leq I_{OUT} \leq 1.0A$ , $P_o \leq 15W$	14.25	15.0	15.75		
Input Regulation	Reg line	1	$T_j=25^{\circ}C$	$17.5V \leq V_{IN} \leq 30V$	-	-	150	mV
				$20V \leq V_{IN} \leq 26V$	-	-	75	
Load Regulation	Reg load	1	$T_j=25^{\circ}C$	$5mA \leq I_{OUT} \leq 1.2A$	-	-	150	mV
				$250mA \leq I_{OUT} \leq 750mA$	-	-	75	
Quiescent Current	$I_B$	1	$T_j=25^{\circ}C$	-	-	6.0	mA	
Quiescent Current Change	$\Delta I_B$	1	$T_j=25^{\circ}C$	$5mA \leq I_{OUT} \leq 1.2A$	-	-	0.5	mA
				$18.5V \leq V_{IN} \leq 30V$	-	-	0.8	mA
Average Temperature Coefficient of Output Voltage	$TC_{VO}$	1	$I_{OUT} = 5mA$	-	-1.8	-	mV/ $^{\circ}C$	
Short Circuit Current Limit	$I_{SC}$	1	$T_j=25^{\circ}C$ , $V_{IN} = 35V$	-	0.75	1.2	A	

## TEST CIRCUIT1/STANDARD APPLICATION CIRCUIT



## TEST CIRCUIT

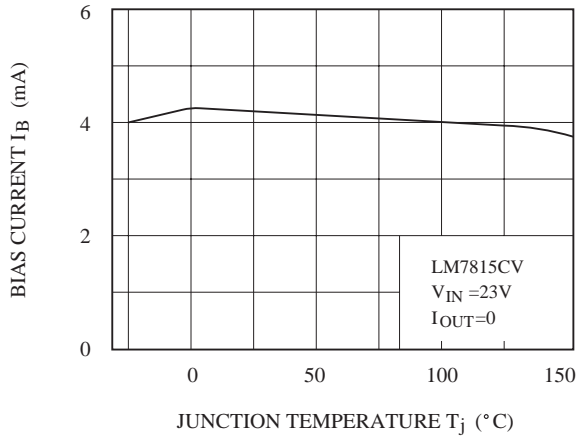
1.  $V_{OUT}$ , Reg · line, Reg · load,  $I_B$ ,  $\Delta I_B$ ,  $\Delta V_{OUT}/\Delta t$ ,  $|V_{IN} - V_{OUT}|$ ,  $TC_{VO}$



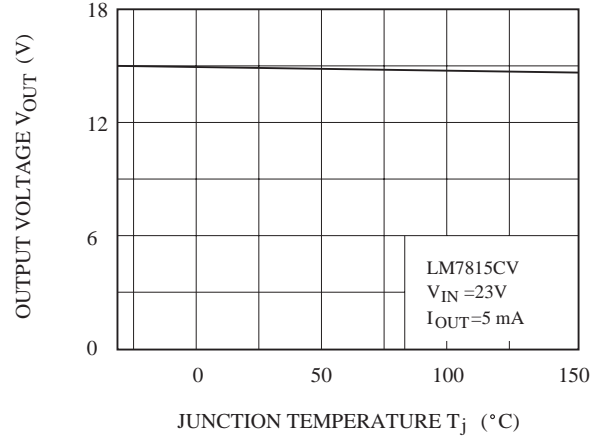


# LM7815CV

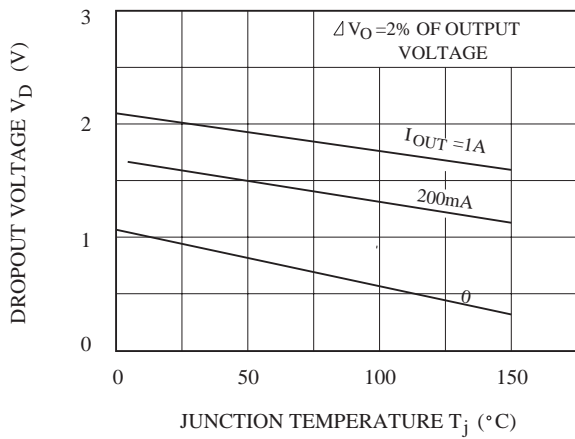
$I_B - T_j$



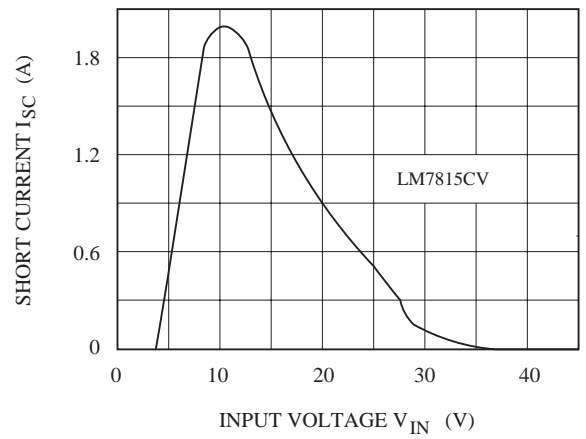
$V_{OUT} - T_j$



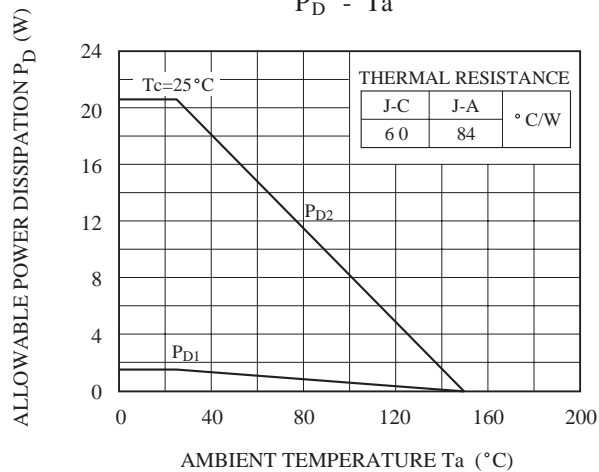
$V_D - T_j$



$V_{IN} - I_{SC}$



$P_D - T_a$



## Package Demensions

### TO-220 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
C	1.23		1.32	0.048		0.051
D	2.40		2.72	0.094		0.107
D1		1.27			0.050	
E	0.49		0.70	0.019		0.027
F	0.61		0.88	0.024		0.034
F1	1.14		1.70	0.044		0.067
F2	1.14		1.70	0.044		0.067
G	4.95		5.15	0.194		0.203
G1	2.4		2.7	0.094		0.106
H2	10.0		10.40	0.393		0.409
L2		16.4			0.645	
L4	13.0		14.0	0.511		0.551
L5	2.65		2.95	0.104		0.116
L6	15.25		15.75	0.600		0.620
L7	6.2		6.6	0.244		0.260
L9	3.5		3.93	0.137		0.154
DIA.	3.75		3.85	0.147		0.151

