7818
DATASHEET

Specification Revision History:

Version	Date	Description
V1.0	2020/08	New
V1.1	2021/05	Modify Ordering Information
V1.2	2023/02	Modify Ordering Information
V1.3	2025/03	Add application precautions and overall typesetting.

Three-terminal positive Voltage Regulator

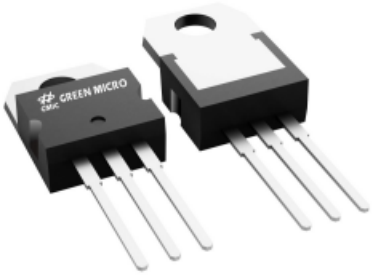
General Description

The 78XX family is monolithic fixed voltage regulator integrated circuit. They are suitable for applications that required supply current up to 1.0 A.

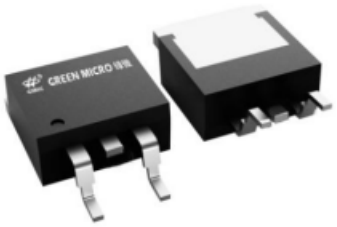
FEATURES

- Output Current Up To 1.0A
- Fixed Output Voltage Of 3.3V,5V,6V,8V,9V,12V,15V,18V and 24V Available
- Thermal Overload Shutdown Protection
- Short Circuit Current Limiting
- Output Transistor SOA Protection

The appearance of the product



TO-220-3

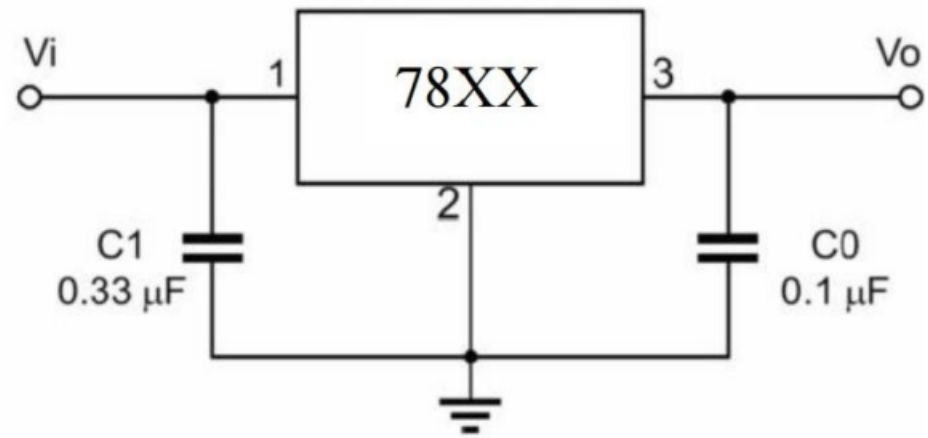


TO-263-2

Ordering Information

Product Model	Package Type	Marking	Packing	Packing Qty
L7818CAT	TO-220-3	7818 T299	TUBE	1000PCS/BOX
L7818CD2TKT	TO-263-2	7818 299	TUBE	1000PCS/BOX
L7818	TO-220-3	7818 G299	TUBE	1000PCS/BOX

Typical Application Circuits



Absolute Maximum Ratings(T=25°C,unless otherwise specified)

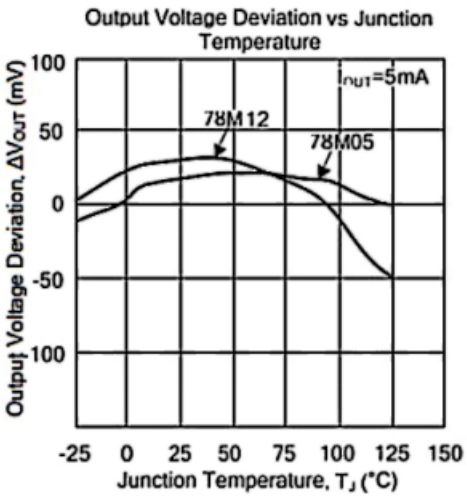
Characteristic	Value	Value	Unit
Input Voltage	Vi	35	V
Thermal Resistance Junction-Case	$R_{\theta JC}$	10	C/W
Thermal Resistance Junction-Air	$R_{\theta JA}$	93	C/W
Operating Temperature Range	T_{OPR}	-40~+125	°C
Storage Temperature Range	T_{STG}	-55~+150	°C

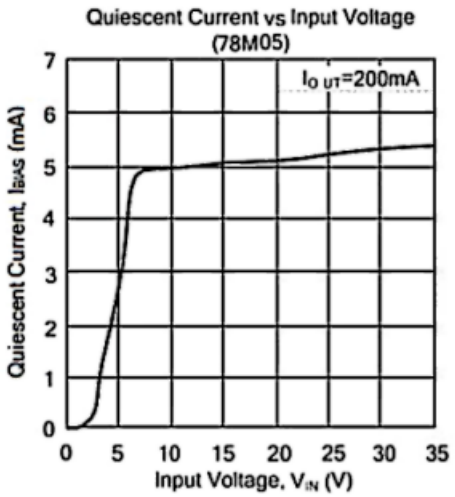
Electrical Characteristics

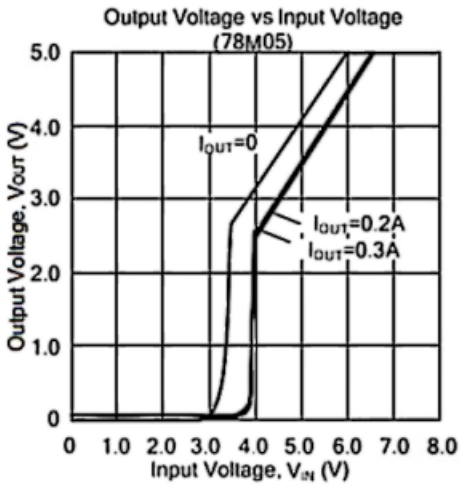
For 7818(unless otherwise noted,Vi=25V,Io=350mA,Ci=0.33μF,Co=0.1μF)

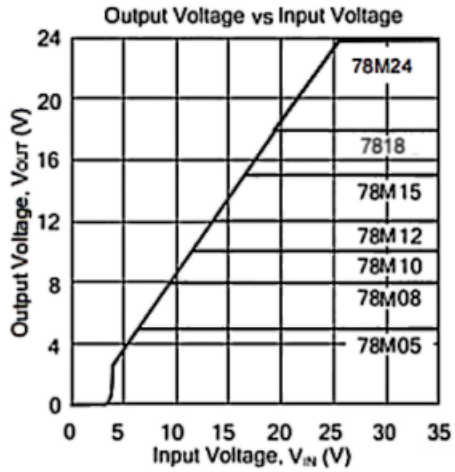
Characteristics	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	Vo	Tj=+25°C	17.28	18	18.72	V
		20V≤Vi≤30V,Io=5mA～0.35A	17.1	18	18.90	
Line Regulation*	△Vo	20V≤Vi≤30V,Io=0.2A,T_J=25°C		8	100	mV
		22V≤Vi≤30V,Io=0.2A,T_J=25°C		4	80	
Load Regulation*	△Vo	T_J=25°C,Io=5mA～0.5A		27	300	mV
		T_J=25°C,Io=5mA～200mA		10	150	
Quiescent Current	I_Q	T_J=+25°C		4.0	6.0	mA
Quiescent Current Change	△I_Q	21V≤Vi≤30V,Io=200mA			0.8	mA
		5mA≤Io≤0.35A			0.5	
Output Noise Voltage	V_N	10Hz≤f≤100kHz,Tj=25°C		70	300	μV
Ripple Rejection	RR	20V≤Vi≤30V,f=120Hz, Io=300mA,T_J=25°C	48	55		dB
Dropout Voltage	Vd	T_J=+25°C		1.7		V
Short Circuit Current Limit	Isc	Vi=Vo+2V,T_J=+25°C		0.9		A

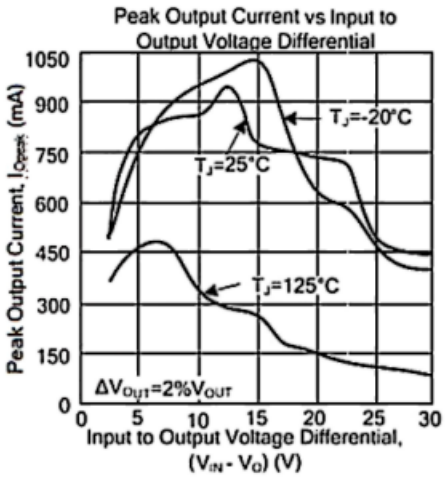
Typical Characteristics

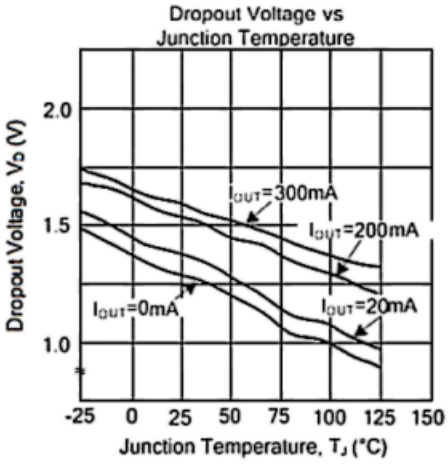








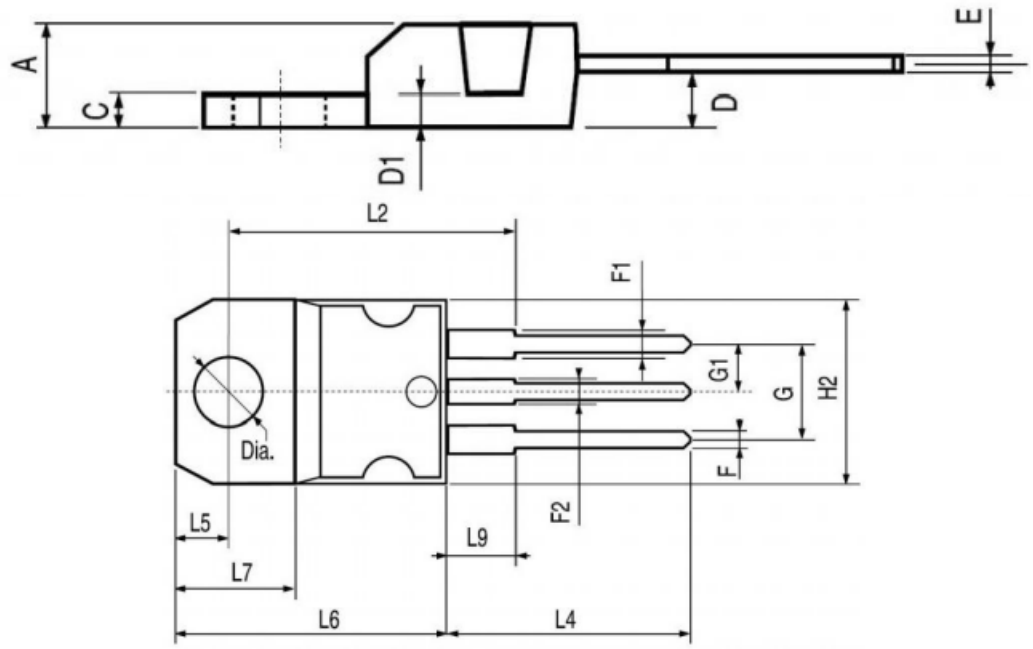




Outline Dimensions

TO-220-3

Unit : mm



Symbol	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		10.70	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

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