

isc Three Terminal Positive Voltage Regulator

LM7812

FEATURES

- Output current in excess of 1 A
- Output voltage of 12V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- 100% tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

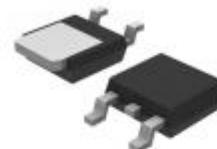
ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	RATING	UNIT
V_i	DC input voltage	35	V
I_o	Output current	internally limited	
P_{tot}	Power dissipation	internally limited	
T_{OP}	Operating junction temperature	0~150	$^{\circ}\text{C}$
T_{stg}	Storage temperature	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

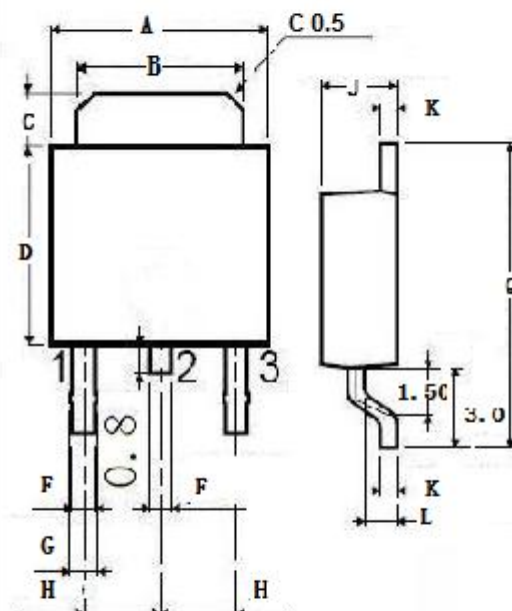
SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3	$^{\circ}\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^{\circ}\text{C/W}$

DPAK



PIN: 1. Input
2. Ground
3. Output

TO-252 package



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

isc Three Terminal Positive Voltage Regulator**LM7812****• ELECTRICAL CHARACTERISTICS**

$T_j=25^{\circ}\text{C}$ ($V_i=19\text{V}$, $I_o=0.5\text{A}$, $C_i=0.33\ \mu\text{F}$, $C_o=0.1\ \mu\text{F}$ unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_o	Output Voltage	$V_{in}=19\text{V}$; $I_o=500\text{mA}$	11.5	12.5	V
V_o	Output Voltage	$I_o=5\text{ mA to }1\text{A}$; $P_o\leq 15\text{W}$; $V_{in}=14.5\text{ to }27\text{V}$;	11.4	12.6	V
ΔV_v	Line Regulation	$14.5\text{V}\leq V_{in}\leq 30\text{V}$ $16\text{V}\leq V_{in}\leq 22\text{V}$		240 120	mV
ΔV_i	Load Regulation	$5.0\text{mA}\leq I_o\leq 1.0\text{ A}$ $250\text{mA}\leq I_o\leq 750\text{mA}$		240 120	mV
I_b	Quiescent Current	$V_{in}=19\text{V}$; $I_o=0.5\text{A}$		8.0	mA
Δ_{b1}	Quiescent Current Change	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$		0.5	mA
Δ_{b2}	Quiescent Current Change	$14.5\text{V}\leq V_{in}\leq 30\text{V}$		1.0	mA