

isc Three Terminal Positive Voltage Regulator

LM7805

FEATURES

- Output current in excess of 1.0A
- Output voltage of 5V
- 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°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	-40~125	°C
T _{stg}	Storage temperature	-55~150	°C

THERMAL CHARACTERISTICS

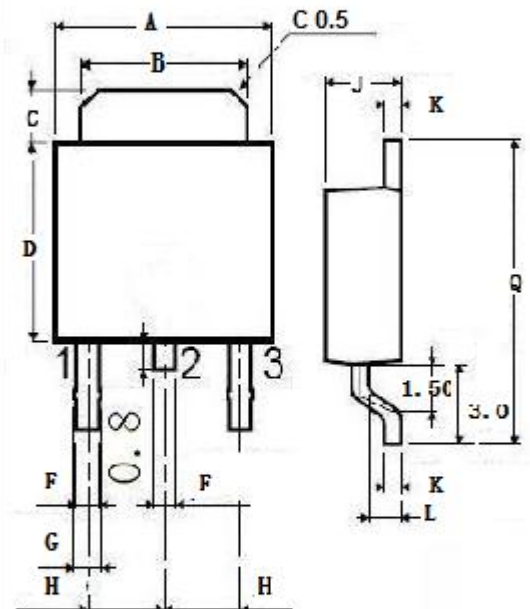
SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	5	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	65	°C/W

DPAK



PIN: 1. Input
2. Ground
3. Output

T0-252 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**LM7805****• ELECTRICAL CHARACTERISTICS** $T_j=25^{\circ}\text{C}$ ($V_i=10\text{V}$, $I_o=0.5\text{A}$, $C_i=0.33\ \mu\text{F}$, $C_o=0.1\ \mu\text{F}$ unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_o	Output Voltage	$V_{in}=10\text{V}$; $I_o=500\text{mA}$	4.8	5.2	V
V_o	Output Voltage	$7\text{V}\leq V_{in}\leq 20\text{V}$; $P_o\leq 15\text{W}$ $5.0\text{mA}\leq I_o\leq 1.0\text{A}$	4.75	5.25	V
ΔV_v	Line Regulation	$7\text{V}\leq V_{in}\leq 25\text{V}$ $8\text{V}\leq V_{in}\leq 12\text{V}$		100 50	mV
ΔV_i	Load Regulation	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$ $250\text{mA}\leq I_o\leq 750\text{mA}$		100 50	mV
I_b	Quiescent Current			8.0	mA
Δ_{b1}	Quiescent Current Change	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$; $V_{in}=10\text{V}$		0.5	mA
Δ_{b2}	Quiescent Current Change	$7\text{V}\leq V_{in}\leq 25\text{V}$; $I_o=500\text{mA}$		1.3	mA

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.