

**isc Three Terminal Positive Voltage Regulator**
**7812**
**FEATURES**

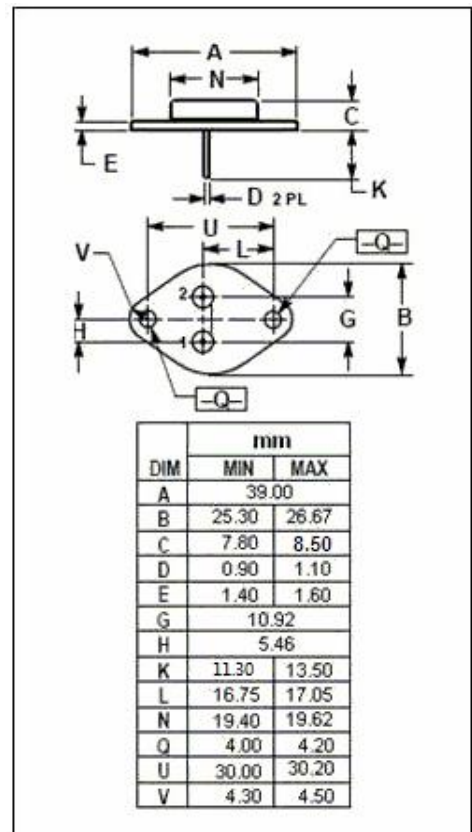
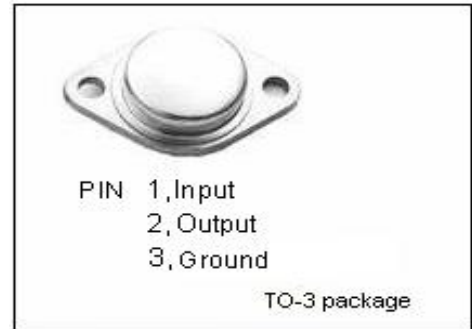
- Output current in excess of 1.5A
- Output voltage of 12V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	RATING	UNIT
V <sub>i</sub>	DC input voltage	35	V
I <sub>o</sub>	Output current	internally limited	
P <sub>tot</sub>	Power dissipation	internally limited	
T <sub>OP</sub>	Operating junction temperature	-40~125	°C
T <sub>stg</sub>	Storage temperature	-55~150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(j-c)</sub>	Thermal Resistance, Junction to Case	3	°C/W
R <sub>th(j-a)</sub>	Thermal Resistance, Junction to Ambient	50	°C/W



**isc Three Terminal Positive Voltage Regulator****7812****• 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
$\Delta V_v$	Line Regulation	$14.5\text{V}\leq V_{in}\leq 30\text{V}$ ; $I_o=500\text{mA}$		120	mV
$\Delta V_i$	Load Regulation	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$ ; $V_{in}=19\text{V}$		100	mV
$I_b$	Quiescent Current	$V_{in}=19\text{V}$ ; $I_o=1.5\text{A}$		6.0	mA
$\Delta_{b1}$	Quiescent Current Change	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$ ; $V_{in}=19\text{V}$		0.5	mA
$\Delta_{b2}$	Quiescent Current Change	$15\text{V}\leq V_{in}\leq 30\text{V}$ ; $I_o=500\text{mA}$		0.8	mA

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