

isc Three Terminal Negative Voltage Regulator

7909

FEATURES

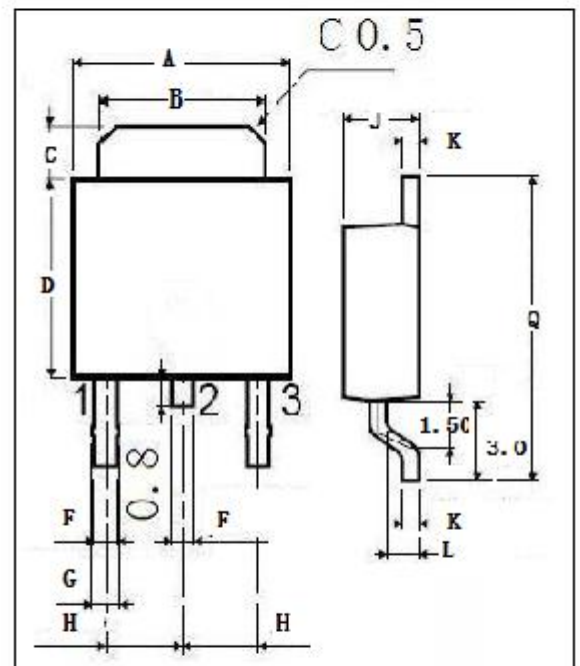
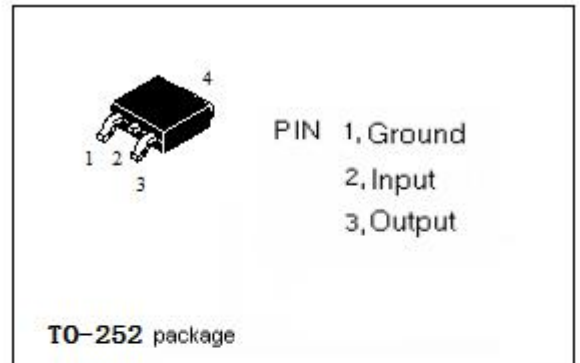
- Output current in excess of 1.0A
- Output voltage of -9V
- Internal thermal overload protection
- Short circuit protection
- Output transistor safe operating Safe-Area compensation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation
- 100% avalanche tested

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	0~125	°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



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 Negative Voltage Regulator**7909****• ELECTRICAL CHARACTERISTICS** $T_j=25^{\circ}\text{C}$ ($V_i=-15\text{V}$, $I_o=0.5\text{A}$, $C_i=2.2\mu\text{F}$, $C_o=1\mu\text{F}$ unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V_o	Output Voltage	$V_{in}=-9\text{V}$; $I_o=0.5\text{A}$	-8.7	-9.0	-9.3	V
V_o	Output Voltage	$V_{in}=-1.5\text{V to }-23\text{V}$; $I_o=5\text{mA to }1\text{A}$; $P_o\leq 15\text{W}$	-8.6	-9.0	-9.4	V
ΔV_v	Line Regulation	$-11.5\text{V}\leq V_{in}\leq -26\text{V}$; $I_o=0.5\text{A}$ $-12\text{V}\leq V_{in}\leq -18\text{V}$; $I_o=0.5\text{A}$			180 90	mV
ΔV_i	Load Regulation	$5.0\text{mA}\leq I_o\leq 1.5\text{A}$; $250\text{mA}\leq I_o\leq 750\text{mA}$;			180 90	mV
I_d	Quiescent Current	$V_{in}=-15\text{V}$; $I_o=0.5\text{A}$			6	mA
Δ_{d1}	Quiescent Current Change	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$; $V_{in}=-15\text{V}$			0.5	mA
Δ_{d2}	Quiescent Current Change	$-11.5\text{V}\leq V_{in}\leq -26\text{V}$; $I_o=0.5\text{A}$			1	mA