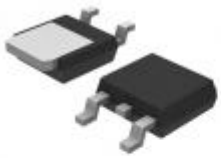
isc Three Terminal Positive Voltage Regulator MC7812

FEATURES

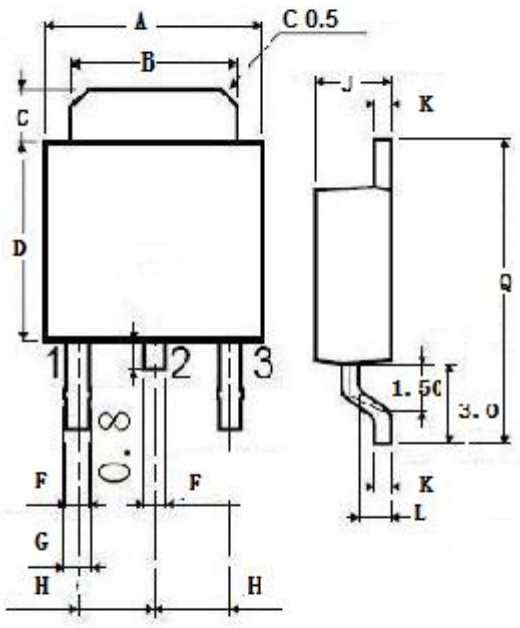
- Output current in excess of 1 A
- Output voltage of 12V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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	℃
T_{stg}	Storage temperature	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	65	℃/W

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• ELECTRICAL CHARACTERISTICS

T_j=25℃ (V_i= 19V, I_O=0.5A, C_i= 0.33 μF, C_O= 0.1 μF unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_O	Output Voltage	V_{in}=19V; I_O=500mA	11.5	12.5	V
V_O	Output Voltage	I_O=5 mA to 1A;Po≤15W; V_{in}=14.5 to 27V;	11.4	12.6	V
$\triangle V_V$	Line Regulation	14.5V≤V_{in}≤30V 16V≤V_{in}≤22V		240 120	mV
$\triangle V_i$	Load Regulation	5.0mA≤I_O≤1.5 A 250mA≤I_O≤750mA		240 120	mV
I_b	Quiescent Current	V_{in}=19V; I_O=0.5A		8.0	mA
$\triangle_{b1}$	Quiescent Current Change	5.0mA≤I_O≤1.0A		0.5	mA
$\triangle_{b2}$	Quiescent Current Change	14.5V≤V_{in}≤30V		1.0	mA