

isc Three Terminal Positive Voltage Regulator

LM7824

FEATURES

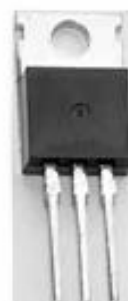
- Output current in excess of 1.5A
- Output voltage of 24V
- Internal thermal overload protection
- Short circuit protection
- Output transition Safe-Area compensation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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

SYMBOL	PARAMETER	RATING	UNIT
V_i	DC input voltage	40	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	$^{\circ}\text{C}$

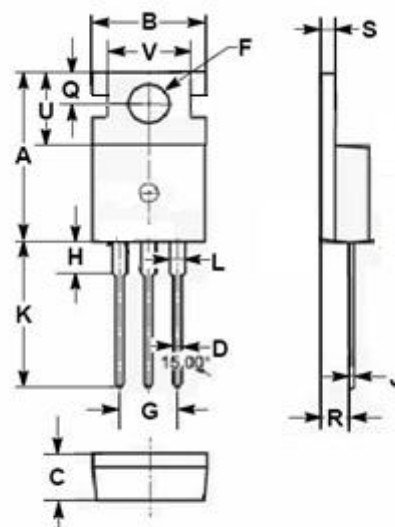
THERMAL CHARACTERISTICS

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	50	$^{\circ}\text{C/W}$



PIN 1, Input
2, Ground
3, Output

1 2 3 TO-220C package



DIM	mm	
	MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

isc Three Terminal Positive Voltage Regulator**LM7824****• ELECTRICAL CHARACTERISTICS**

$T_j=25^{\circ}\text{C}$ ($V_i=33\text{V}$, $I_o=0.5\text{A}$, $C_i=0.33\ \mu\text{F}$, $C_o=0.1\ \mu\text{F}$ unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_o	Output Voltage	$V_{in}=33\text{V}$; $I_o=500\text{mA}$	23	25	V
ΔV_v	Line Regulation	$27\text{V} \leq V_{in} \leq 38\text{V}$; $I_o=500\text{mA}$		240	mV
ΔV_i	Load Regulation	$5.0\text{mA} \leq I_o \leq 1.5\text{A}$; $V_{in}=33\text{V}$		240	mV
I_b	Quiescent Current	$V_{in}=33\text{V}$; $I_o=1.0\text{A}$		8.0	mA
Δ_{b1}	Quiescent Current Change	$5.0\text{mA} \leq I_o \leq 1.0\text{A}$; $V_{in}=33\text{V}$		0.5	mA
Δ_{b2}	Quiescent Current Change	$28\text{V} \leq V_{in} \leq 38\text{V}$; $I_o=500\text{mA}$		1.0	mA