

/ Descriptions

TO-220F Voltage Regulator in a TO-220F Plastic Package.

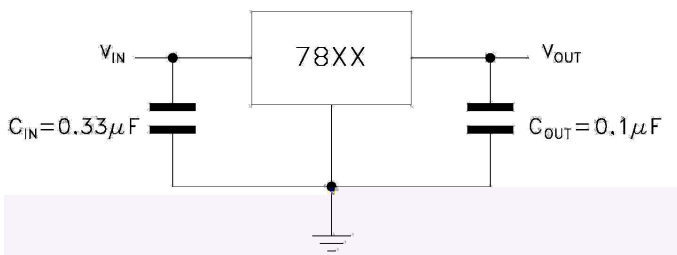
/ Features

1.5A,
3-Terminal regulators ,output current up to 1.5A, internal thermal overload protection and short-circuit limiting.

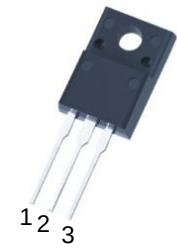
/ Applications

Voltage Regulator.

/ / Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN PIN 2 GND PIN 3 OUT

/ Marking

See Marking Instructions

1 / Absolute Maximum Ratings($T_a=25^\circ\text{C}$;)

Parameter	Symbol	Rating	Unit
Input voltage	V_i	35	V
Thermal Resistance Junction-Ambient	R_{JA}	60	/W
Thermal Resistance Junction-Case	R_{JC}	5.0	/W
Operating Junction Temperature Range	T_{OPR}	0 125	
Storage temperature range	T_{stg}	-65 150	

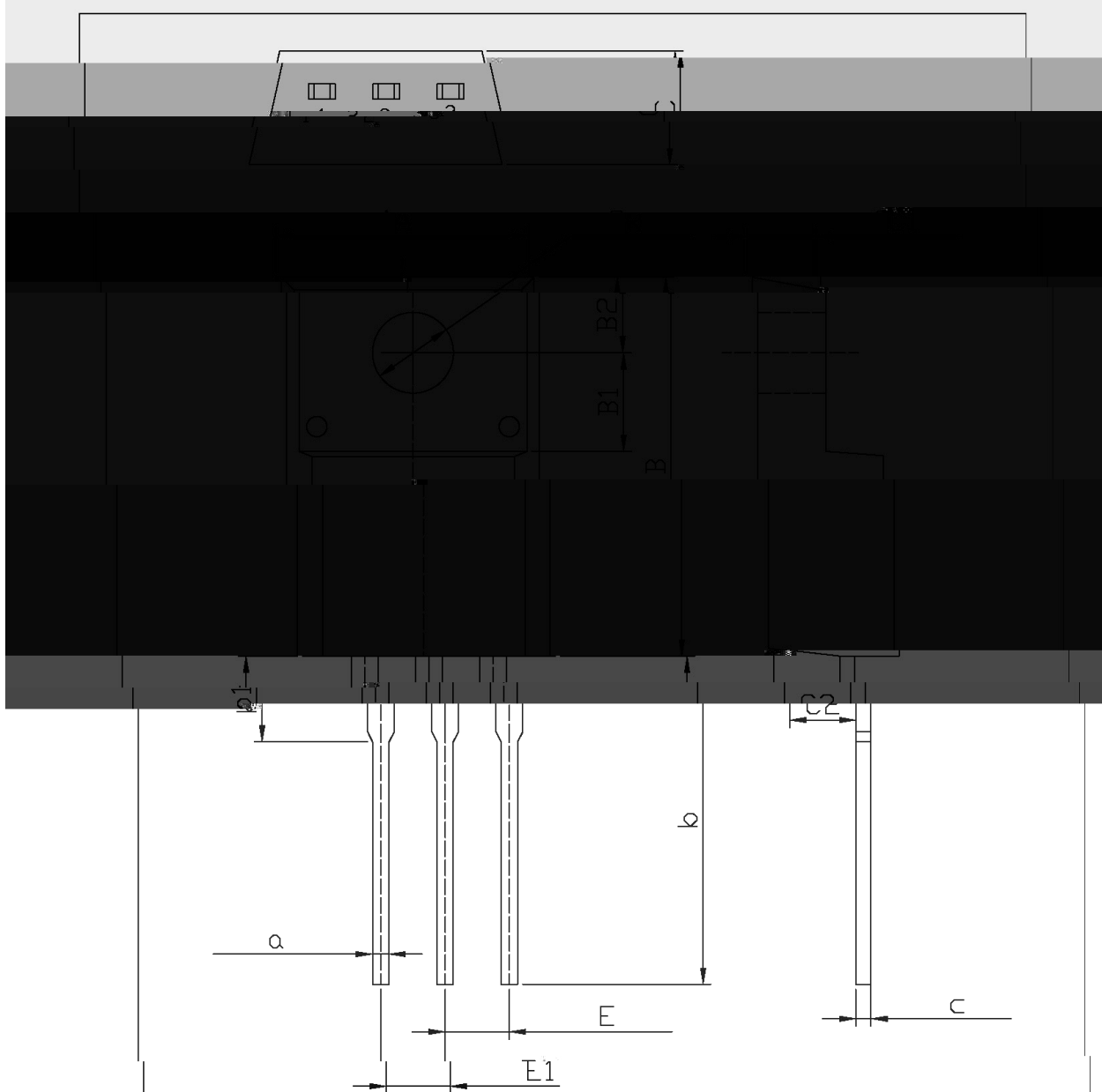
2 / Electrical Characteristics($T_a=25^\circ\text{C}$ $V_i=15\text{V}$, $I_o=500\text{mA}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_j=25^\circ\text{C}$	8.65	9.0	9.35	V
		$V_i=11.5\text{V}-26\text{V}$ $I_o=5\text{mA}-1\text{A}$ $P_o \leq 15\text{W}$	8.55	9.0	9.45	V
Load Regulation	ΔV_o	$T_j=25^\circ\text{C}$ $I_o=5.0\text{mA}-1.5\text{A}$			180	mV
		$T_j=25^\circ\text{C}$ $I_o=250\text{mA}-750\text{mA}$			90	mV
Line regulation	ΔV_o	$T_j=25^\circ\text{C}$ $V_i=11.5\text{V}-26\text{V}$			180	mV
		$T_j=25^\circ\text{C}$ $V_i=12\text{V}-18\text{V}$			90	mV
Quiescent Current	I_q	$T_j=25^\circ\text{C}$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i=11.5\text{V}-26\text{V}$			1.0	mA
		$I_o=5.0\text{mA}-1.0\text{A}$			0.5	mA
Output Voltage Drift	$\Delta V_o / T$	$I_o=5.0\text{mA}$		-1.0		mV/
Output Noise Voltage	eN	B=10Hz-100KHz $T_j=25^\circ\text{C}$		70		V/ V_o
Supply Voltage Rejection	SVR	$V_i=12\text{V}-23\text{V}$ $f=120\text{Hz}$	55			dB
Dropout Voltage	V_d	$I_o=1\text{A}$ $T_j=25^\circ\text{C}$		2.0		V
Output Resistance	R_o	$f=1\text{KHz}$		17		m
Short Circuit Current	I_{sc}	$V_i=35\text{V}$ $T_j=25^\circ\text{C}$		0.40		A
Short Circuit Peak Current	I_{scp}	$T_j=25^\circ\text{C}$		2.2		A

Package Dimensions

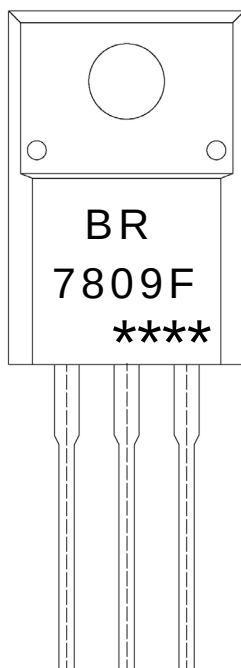
T0-220F

单位: mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
C	4.3	4.7	b1	2.9	3.9
A	9.7	10.3	a	2.55	2.75
B	14.7	15.3	E	2.29	2.79
B1	3.8	4.0	E1	2.29	2.79
B2	2.9	3.1	C1	2.5	2.9
R	3.0	3.4	C2	2.5	2.7
b	12.5	13.5	c	0.5	0.7

 / Marking Instructions



BR

7809F

Note:

BR: Company Code.

7809F: Product Type.

****: Lot No. Code, code change with Lot No.

