

5 é / Descriptions

TO-220F .> // x 9 ² ... ~ož Voltage Regulator in a TO-220F Plastic Package.

αª / Features

€ | 9 ² ... ~ k ý ß v ä 1.5A, Ä — ½ ‘ y ? è ' òož
3-Terminal regulators ,output current up to 1.5A, internal thermal overload protection and short-circuit limiting.

Đ ÷ / Applications

9 ² ... ~ož
Voltage Regulator.

Ã W] Ô · / € Đ Ô · / Equivalent Circuit or Application Circuit

• Ô - æ / Pinning

1 2 3

PIN1 y IN PIN 2 y GND PIN 3 y OUT

, M V / Marking

• - ~ª ¢ož See Marking Instructions

Table 1 / Absolute Maximum Ratings(Ta=25℃ ;)

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	

Table 2 / Electrical Characteristics(Ta=25℃ ; $V_I=14V, I_O=500mA$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_O	$T_J=25^\circ C$	7.7	8.0	8.3	V
		$V_I=10.5V-25V$ $I_O=5mA-1A$ $P_{D(15W)}$	7.6	8.0	8.4	V
Load Regulation	ΔV_O	$T_J=25^\circ C$ $I_O=5.0mA-1.5A$			160	mV
		$T_J=25^\circ C$ $I_O=250mA-750mA$			80	mV
Line regulation	ΔV_O	$T_J=25^\circ C$ $V_I=10.5V-25V$			160	mV
		$T_J=25^\circ C$ $V_I=11V-17V$			80	mV
Quiescent Current	I_q	$T_J=25^\circ C$			8.0	mA
Quiescent Current Change	ΔI_q	$V_I=10.5V-25V$			1.0	mA
		$I_O=5mA-1A$			0.5	mA
Output Voltage Drift	$\Delta V_O / T$	$I_O=5mA$		-0.8		mV/°C
Output Noise Voltage	e_N	$B=10Hz-100KHz$ $T_J=25^\circ C$		52		V/V _O
Supply Voltage Rejection	SVR	$V_I=11.5V-21.5V$ $f=120Hz$	56			dB
Dropout Voltage	V_d	$I_O=1A$ $T_J=25^\circ C$		2.0		V
Output Resistance	R_O	$f=1KHz$		16		mΩ
Short Circuit Current	I_{sc}	$V_I=35V$ $T_J=25^\circ C$		0.45		A
Short Circuit Peak Current	I_{scp}	$T_J=25^\circ C$		2.2		A

Ø □ =) ¢ / Package Dimensions

, M y f / Marking Instructions

BR
7808F

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, y D } ° Z
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Note:

BR: Company Code.

7808F: Product Type.

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

G PD t ... • Ž Ć (x /) / Temperature Profile for Dip Soldering(Pb-Free)

a Ć y

10• Ä ½ “ † 25 ½150 - k Ž • 60 ½90sec;

20• Q > “ † 255 r5 - k Ž • 4 Ò 5 r0.5sec;

30•D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

1.Preheating:25~150 - , Time:60~90sec.

2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“ † y 270 r5 -

Ž • y 10 r1 sec.

Temp:270±5

Time:10±1 sec

G P á / Packaging SPEC.

• ^ x / BULK

Package Type ß m ù ´	Units g m ô h					Dimension g m d Ê (unit ! mm3)		
	Units/Bag /ß	Bags/Inner Box ß/ Ć	Units/Inner Box / Ć	Inner Boxes/Outer Box Ć/ ±	Units/Outer Box / ±	Bag ß	Inner BoxĆ	Outer Box±
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

ì ´ x / TUBE

Package Type ß m ù ´	Units g m ô h					Dimension g m d Ê (unit ! mm3)	
	Units/Tube /Š •	Tubes/Inner Box Š • / Ć	Units/Inner Box / Ć	Inner Boxes/Outer Box Ć/ ±	Units/Outer Box / ±	Tube Š •	Inner BoxĆ
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50

„ Ð y f / Notices