

/ Descriptions

TO-220F

Voltage Regulator in a TO-220F Plastic Package.

/ Features

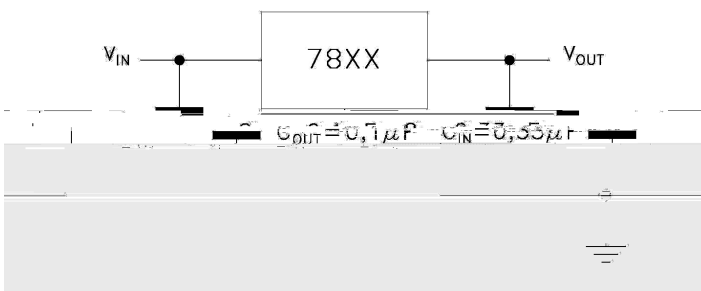
1.5A,

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



/ Marking

See Marking Instructions

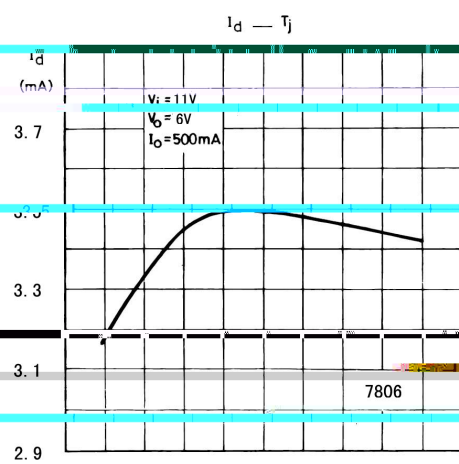
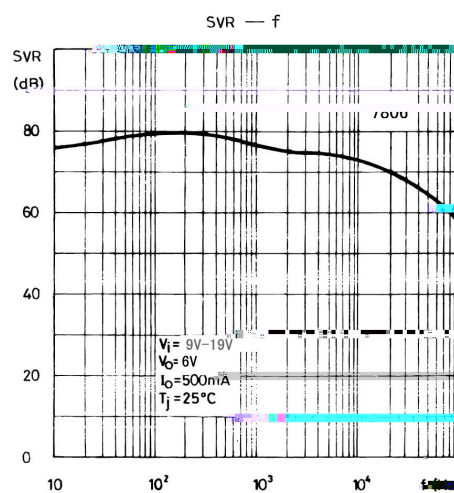
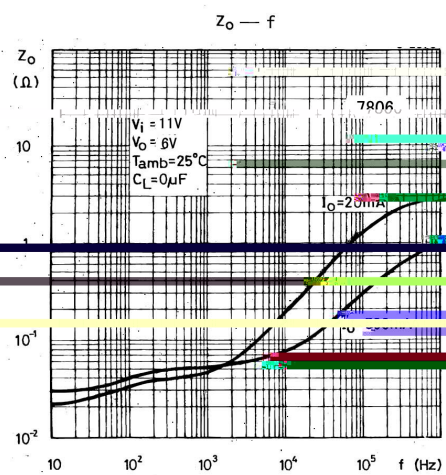
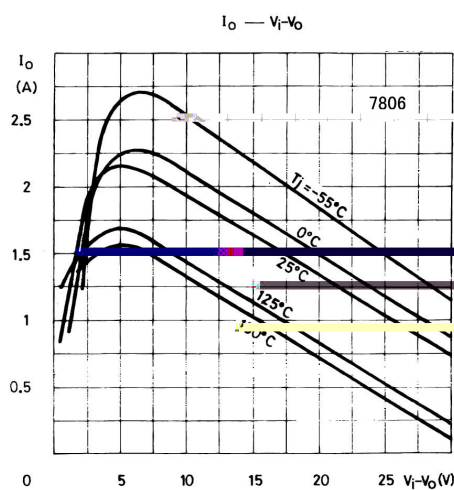
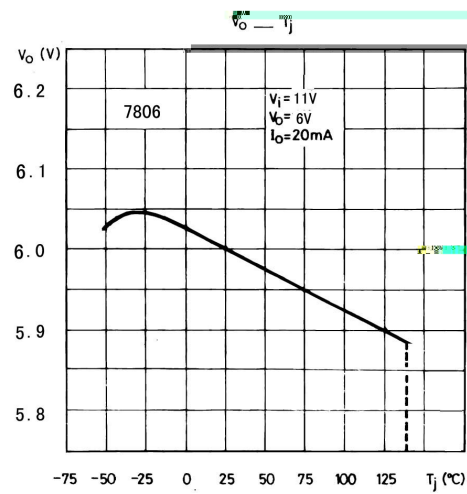
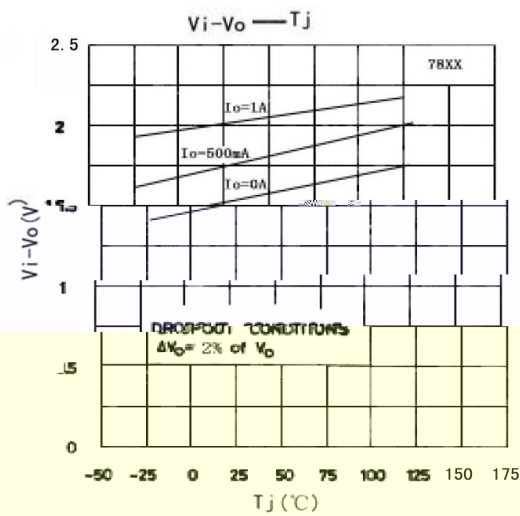
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Input voltage	V_i	35	V
Thermal Resistance Junction-ambient	$R_{\theta JA}$	50	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction-case	$R_{\theta JC}$	5.0	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OPR}	0~125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-65~150	$^\circ\text{C}$

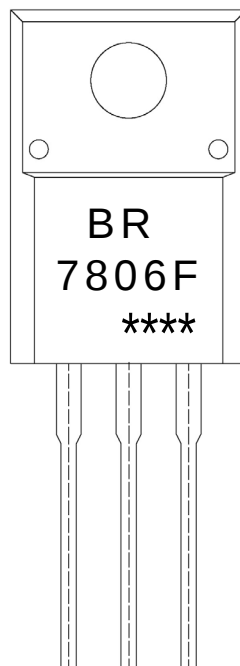
/ Electrical Characteristics($T_a=25^\circ\text{C}$ $V_i=11\text{V}$, $I_o=500\text{mA}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_j=25^\circ\text{C}$	5.75	6.0	6.25	V
		$V_i=9\text{V}-21\text{V}$ $P_o \leq 15\text{W}$, $I_o=5\text{mA}-1\text{A}$,	5.7	6.0	6.3	V
Load Regulation	ΔV_o	$T_j=25^\circ\text{C}$ $I_o=5\text{mA}-1.5\text{A}$			120	mV
		$T_j=25^\circ\text{C}$ $I_o=250\text{mA}-750\text{mA}$			60	mV
Line regulation	ΔV_o	$T_j=25^\circ\text{C}$ $V_i=8\text{V}-25\text{V}$			120	mV
		$T_j=25^\circ\text{C}$ $V_i=9\text{V}-13\text{V}$			60	mV
Quiescent Current	I_q	$T_j=25^\circ\text{C}$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i=9\text{V}-25\text{V}$			0.8	mA
		$I_o=5\text{mA}-1\text{A}$			0.5	mA
Output Voltage Drift	$\Delta V_o/\Delta T$	$I_o=5\text{mA}$		-0.8		mV/ $^\circ\text{C}$
Output Noise Voltage	eN	B=10Hz-100KHz $T_j=25^\circ\text{C}$		45		$\mu\text{V}/V_o$
Supply Voltage Rejection	SVR	$V_i=9\text{V}-19\text{V}$ $f=120\text{Hz}$	59	75		dB
Dropout Voltage	V_d	$I_o=1\text{A}$ $T_j=25^\circ\text{C}$		2.0		V
Output Resistance	R_o	$f=1\text{KHz}$		19		m Ω
Short Circuit Current	I_{sc}	$V_i=35\text{V}$ $T_j=25^\circ\text{C}$		0.55		A
Short Circuit Peak Current	I_{scp}	$T_j=25^\circ\text{C}$		2.2		A

/ Electrical Characteristic Curve



/ Marking Instructions



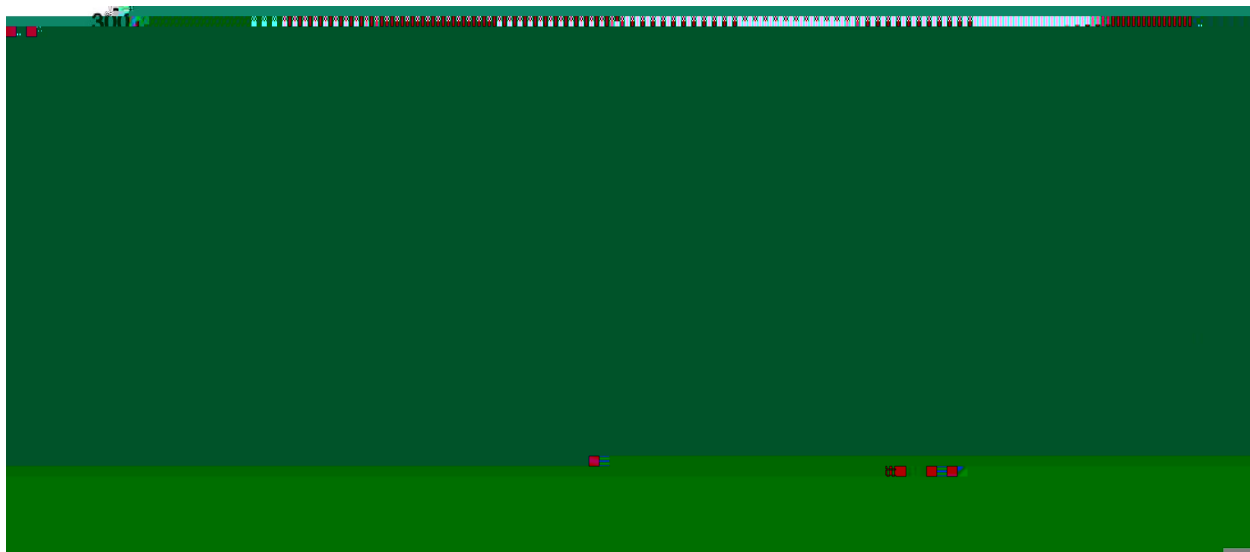
Note:

BR: Company Code.

7806F: Product Type.

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

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-----|-----|----|---------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255 | 5 | 5 | 0.5sec; | 2.Peak Temp.:255 5 , Duration:5 0.5sec. |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270 5 10 1 sec. Temp:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50

/ Notices