

THREE-TERMINAL POSITIVE VOLTAGE REGULATOR

FEATURES

Maximum output current

$$I_{OM} : 1.5A$$

Output voltage

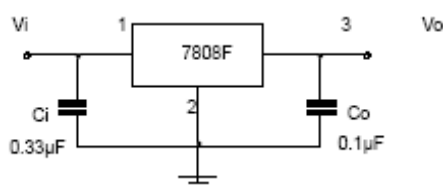
$$V_O : 8 V$$

Continuous total dissipation

$$P_D : 2W (T_J=25^{\circ}C)$$

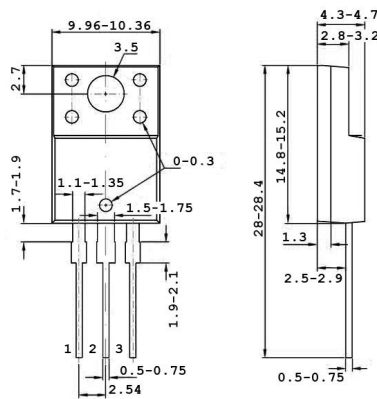
$$15W (T_C=25^{\circ}C)$$

TYPICAL APPLICATION



TO-220F

1. IN
2. GND
3. OUT



UNIT:mm

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameters	Symbols	Value	UNITS
Input Voltage	V_I	35	V
Thermal Resistance Junction - Air	$R_{\theta JA}$	65	$^{\circ}C/W$
Thermal Resistance Junction - Cases	$R_{\theta JC}$	5	$^{\circ}C/W$
Operating Junction Temperature Range	T_{OPR}	0~+150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-65~+150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS

($V_I=14V$, $I_O=500mA$, $0^{\circ}C<T_J<125^{\circ}C$, $C_i=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)

Parameters	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output Voltage	V_O	$T_J=25^{\circ}C$	7.7	8	8.3	V
		$10.5V \leq V_I \leq 23V$, $I_O=5mA-1A$, $P \leq 15W$	7.6	8	8.4	V
Load Regulation	ΔV_O	$T_J=25^{\circ}C$, $I_O=5mA-1.5A$		12	160	mV
		$T_J=25^{\circ}C$, $I_O=250mA-750mA$		4	80	mV
Line Regulation	ΔV_O	$10.5V \leq V_I \leq 25V$, $T_J=25^{\circ}C$		6	160	mV
		$11V \leq V_I \leq 17V$, $T_J=25^{\circ}C$		2	80	mV
Quiescent Current	I_q	$T_J=25^{\circ}C$		4.3	8	mA
Quiescent Current Change	ΔI_q	$10.5V \leq V_I \leq 25V$			1	mA
		$5mA \leq I_O \leq 1A$			0.5	mA
Output Voltage Drift	$\Delta V_O / \Delta T$	$I_O=5mA$		-0.8		mV/ $^{\circ}C$
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$		52		μV
Ripple Rejection	RR	$11.5V \leq V_I \leq 21.5V$, $f=120Hz$, $T_J=25^{\circ}C$	55	72		dB
Dropout Voltage	V_d	$T_J=25^{\circ}C$, $I_O=1A$		2		V
Output Resistance	R_o	$f=1KHz$		16		m Ω
Short Circuit Current	I_{sc}	$V_I=35V$, $T_J=25^{\circ}C$		450		mA
Peak Current	I_{pk}	$T_J=25^{\circ}C$		2.2		A