

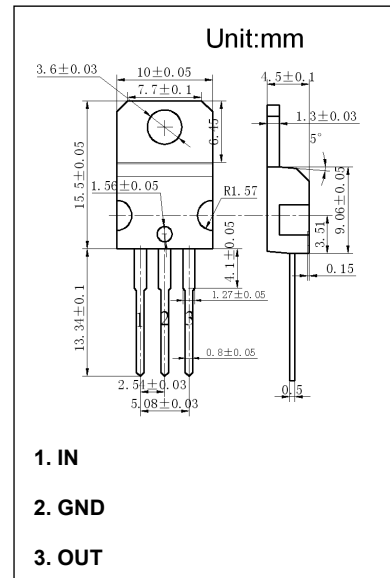
TO-220SE Plastic-Encapsulate Regulators

PT11F1

Three-terminal positive voltage regulator

Features:

- Maximum Output current I_{OM} : 1.2 A
- Output voltage V_o : 15 V
- Continuous total dissipation
 - P_D : 1.5W ($T_a=25^\circ C$)
 - 15W ($T_c=25^\circ C$)



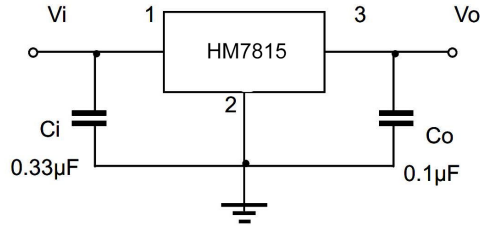
Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

Symbol	Parameter	Value	Unit
V_i	Input Voltage	35	V
$R_{\theta JA}$	Thermal Resistance Junction-Air	83.3	$^\circ C/W$
$R_{\theta JC}$	Thermal Resistance Junction-Case	8.33	$^\circ C/W$
T_{OPR}	Operating Junction Temperature Range	0 to +150	$^\circ C$
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ C$

Electrical Characteristics at Specified Virtual Junction Temperature

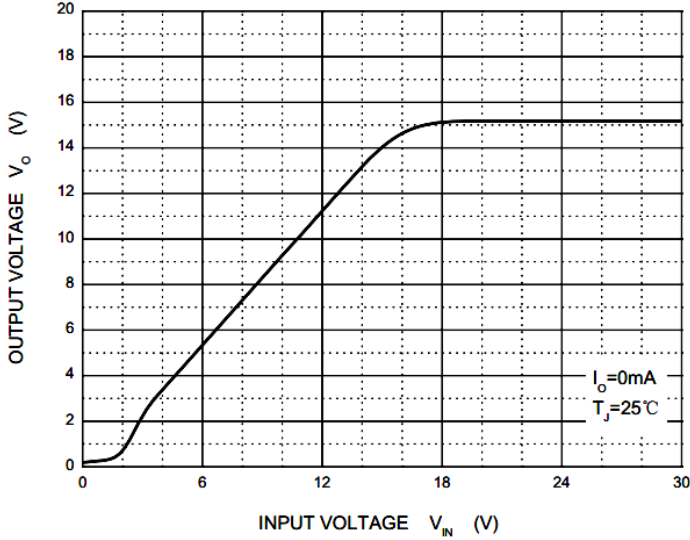
($V_i=-23V$, $I_o=500mA$, $C_i=2.2\mu F$, $C_o=1\mu F$, unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V_o	Output Voltage	$25^\circ C$	14.4	15	15.6	V
		$17.5V \leq V_i \leq 30V$, $I_o=5mA-1A$, $P \leq 15W$	14.25	15	15.75	V
ΔV_o	Load Regulation	$I_o=5mA-1.2A$		12	300	mV
		$I_o=250mA-750mA$		4	150	mV
ΔV_o	Line Regulation	$17.5V \leq V_i \leq 30V$		12	300	mV
		$20V \leq V_i \leq 26V$		3	150	mV
I_q	Quiescent Current	$25^\circ C$		4.3	8	mA
ΔI_q	Quiescent Current Change	$17.5V \leq V_i \leq 30V$			1	mA
ΔI_q		$5mA \leq I_o \leq 1A$			0.5	mA
$\Delta V_o/\Delta T$	Output Voltage Drift	$I_o=5mA$		-1		mV/ $^\circ C$
V_N	Output Noise Voltage	$f=10Hz$ to $100KHz$		90		μV
RR	Ripple Rejection	$f=120Hz$, $18.5V \leq V_i \leq 28.5V$	54	70		dB
V_d	Dropout Voltage	$I_o=1.0A$		2		V
R_o	Output resistance	$f=1KHz$		19		$m\Omega$
I_{sc}	Short Circuit Current	$25^\circ C$		230		mA
I_{pk}	Peak Current	$25^\circ C$		2.1		A

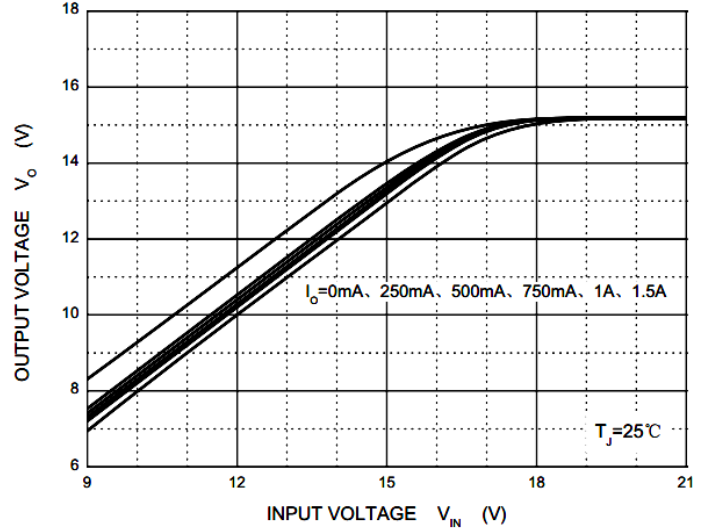


Typical Characteristics

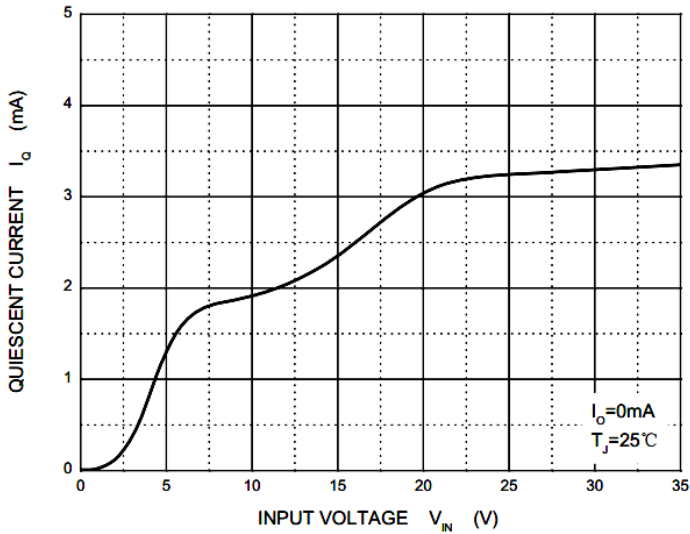
Output Characteristics



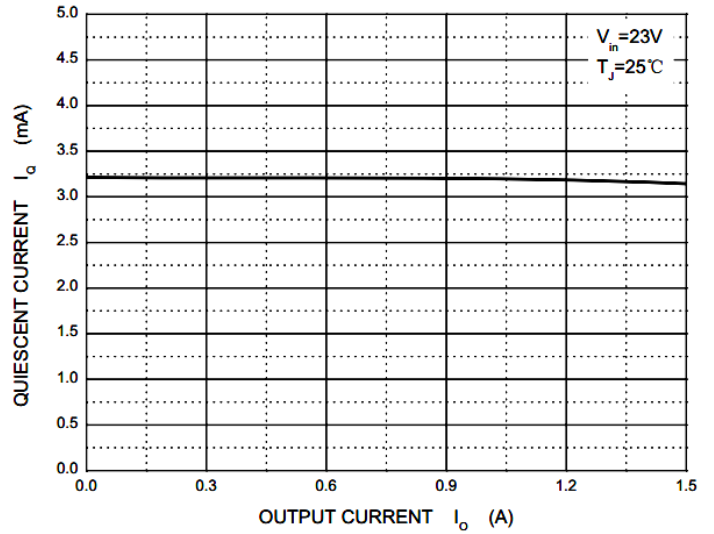
Dropout Characteristics



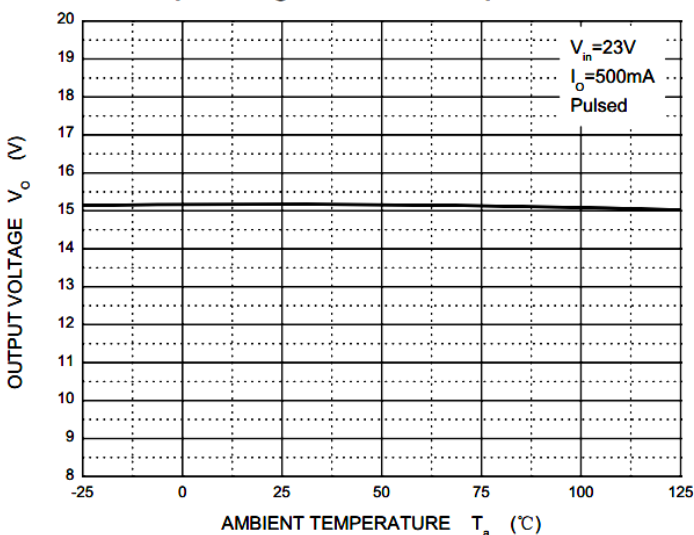
Quiescent Current vs Input Voltage



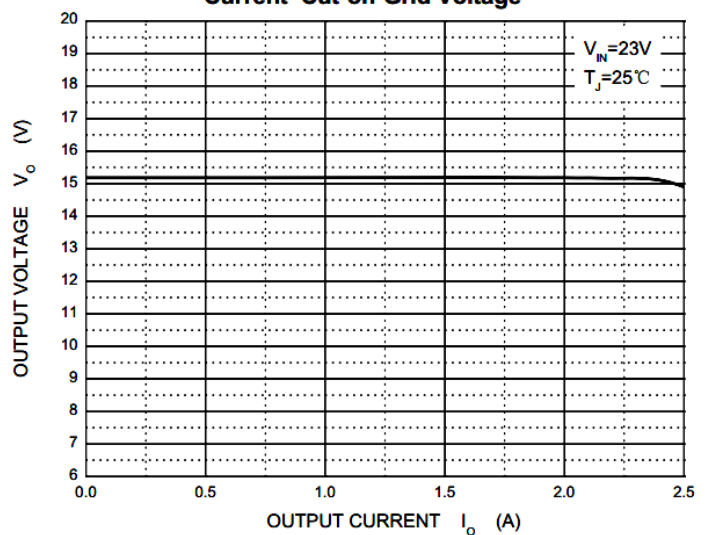
Quiescent Current vs Output Current



Output Voltage vs Ambient Temperature



Current Cut-off Grid Voltage



Power Derating Curve

