VS7915F Three-terminal negative voltage regulator

FEATURES

- Maximum output current
  I_{OM}: 1.5 A
- Output voltage
  V_O:- 15 V
- Continuous total dissipation
  P_D: 1.5 W (T_a= 25 ℃)

TO-220F

1.IN
2.GND
3.OUT

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

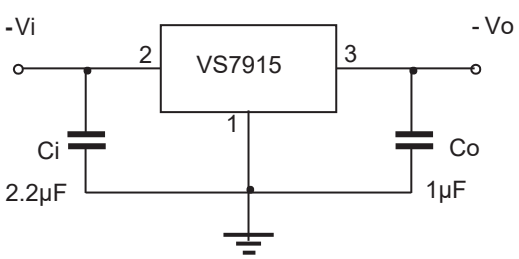
Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Thermal Resistance from Junction to Air	$R_{\theta JA}$	83.3	℃/W
Operating Junction Temperature Range	T_{OPR}	-40~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE (Vi=-23V, Io=500mA, Ci=2.2μF,Co=1μF, unless otherwise specified)

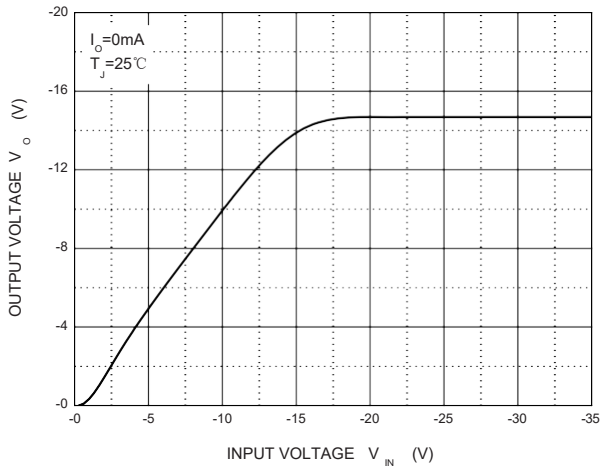
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	Vo	T_J=25℃	-14.55	-15	-15.45	V
		-17.5V≤V_i≤-30V, Io=5mA-1A	-14.25	-15	-15.75	V
Load Regulation	ΔVo	Io=5mA-1.5A ,T_J=25℃		15	200	mV
		Io=250mA-750mA ,T_J=25℃		5	75	mV
Line Regulation	ΔVo	-17.5V≤V_i≤-30V ,T_J=25℃		5	100	mV
		-20V≤V_i≤-26V ,T_J=25℃		3	50	mV
Quiescent Current	Iq	T_J=25℃		2	3	mA
Quiescent Current Change	ΔIq	-17.5V≤V_i≤-30V			0.5	mA
	ΔIq	5mA≤I_O≤1A			0.5	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz ,T_J=25℃		375		μV/Vo
Output Voltage Drift	ΔVo/ΔT	I_O=5mA		-1		mV/℃
Ripple Rejection	RR	-18.5V≤V_i≤-28.5V,f=120Hz	54	60		dB
Dropout Voltage	Vd	Io=1A ,T_J=25℃		1.1		V
Peak Current	Ipk	T_J=25℃		2.1		A

* Pulse test.

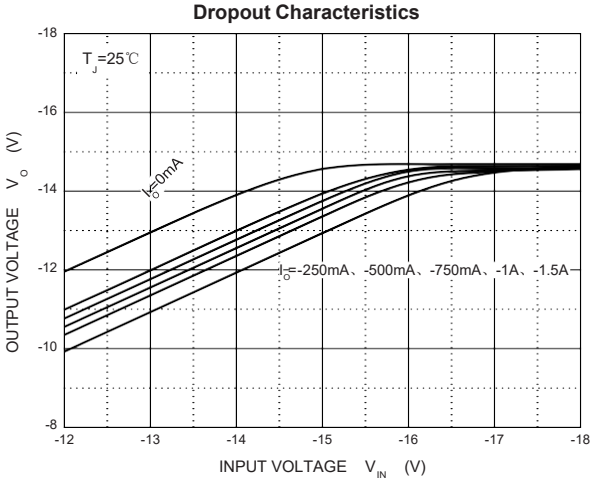
TYPICAL APPLICATION



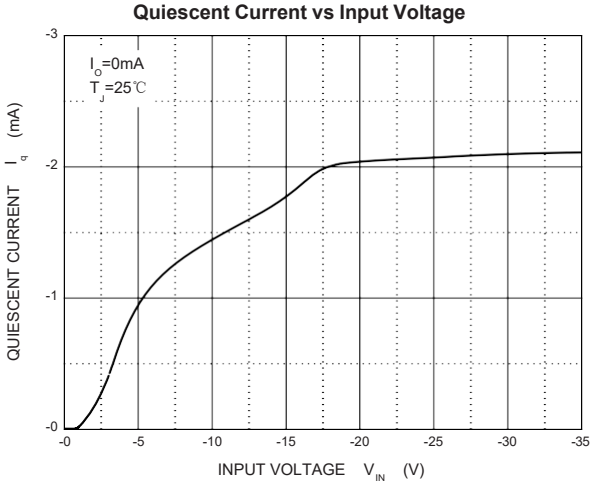
Output Characteristics



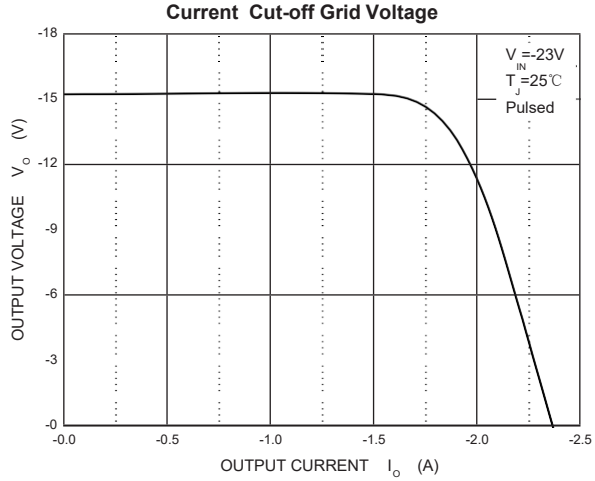
Dropout Characteristics



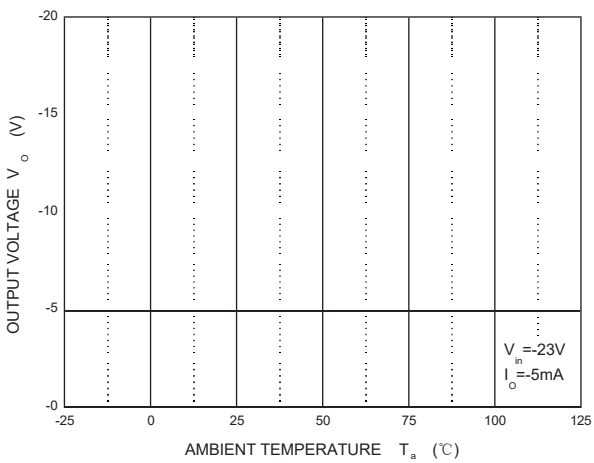
Quiescent Current vs Input Voltage



Current Cut-off Grid Voltage



Output Voltage vs Ambient Temperature



Power Derating Curve