VS7905 Three-terminal negative voltage regulator

FEATURES

- Maximum output current
  I_{OM}: 1.5 A
- Output voltage
  V_O:- 5V
- Continuous total dissipation
  P_D: 1.5 W (T_a= 25 ℃)

TO-220C

1.IN
2.GND
3.OUT

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

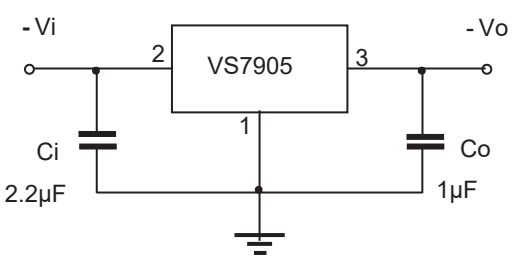
Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Thermal Resistance from Junction to Air	$R_{\theta JA}$	83.3	℃/W
Operating Junction Temperature Range	T_{OPR}	-40~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE(Vi=-10V,Io=500mA,Ci=2.2μF, Co=1μF, unless otherwise specified)

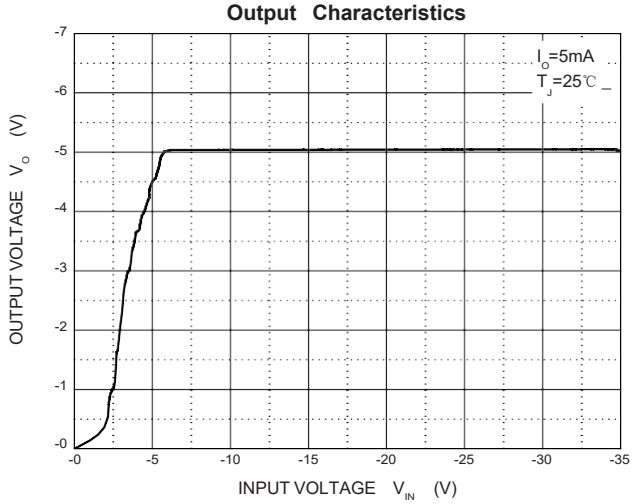
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	Vo	T_J=25℃	-4.85	-5	-5.15	V
		-7V≤V_i≤-20V, Io=5mA-1A	-4.75	-5	-5.25	V
Load Regulation	ΔVo	Io=5mA-1.5A ,T_J=25℃		15	100	mV
		Io=250mA-750mA ,T_J=25℃		5	50	mV
Line Regulation	ΔVo	-7V≤V_i≤-25V ,T_J=25℃		12.5	50	mV
		-8V≤V_i≤-12V ,T_J=25℃		4	15	mV
Quiescent Current	Iq	T_J=25℃		1.5	2	mA
Quiescent Current Change	ΔIq	-7V≤V_i≤-25V			0.5	mA
	ΔIq	5mA≤I_O≤1A			0.5	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz ,T_J=25℃		125		μV/Vo
Output Voltage Drift	ΔVo/ΔT	I_O=5mA		-0.4		mV/℃
Ripple Rejection	RR	-8V≤V_i≤-18V,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.

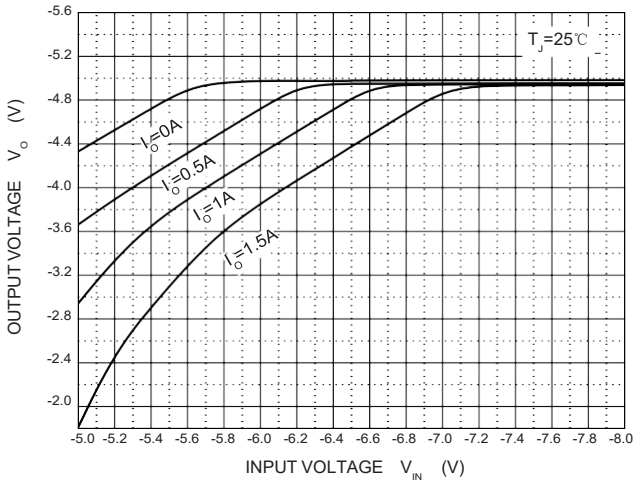
TYPICAL APPLICATION



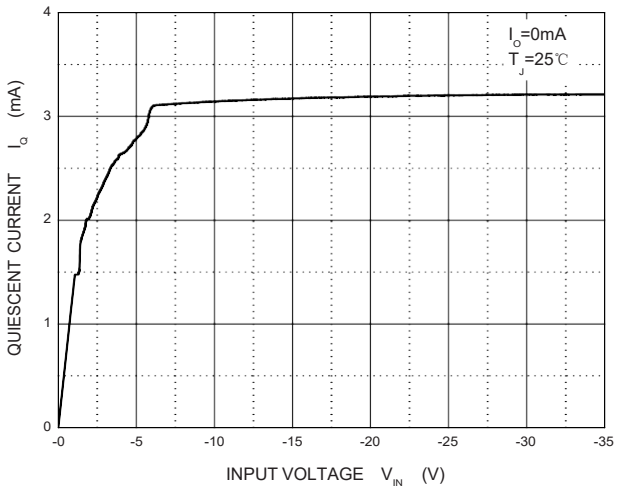
Output Characteristics



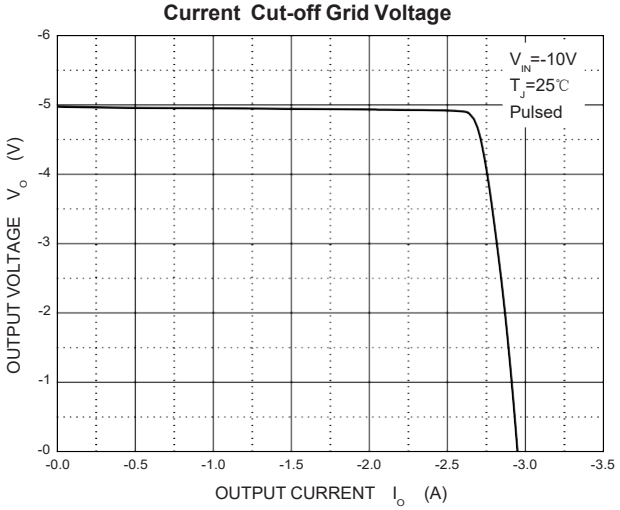
Dropout Characteristics



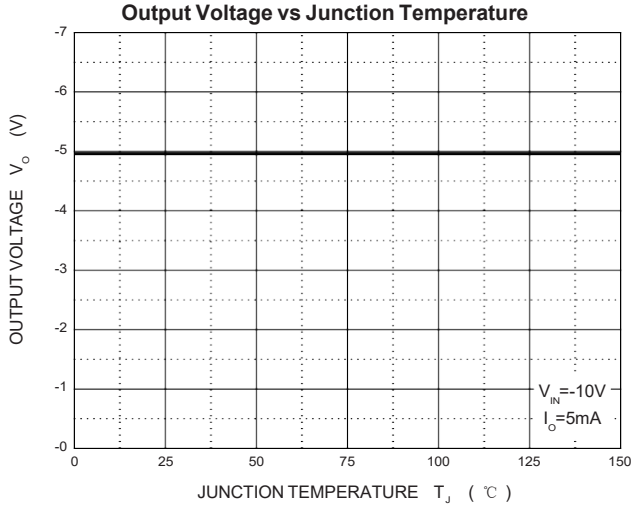
Quiescent Current



Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve