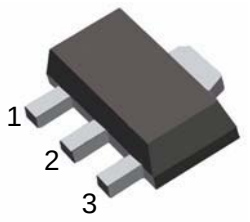
FR79L05F

Three-terminal negative voltage regulator

SOT-89

1. GND
2. IN
3. OUT



FEATURES

Maximum Output current
$I_{OM:}$ 0.1 A
Output voltage
V_o: -5 V
Continuous total dissipation
P_D: 0.5 W

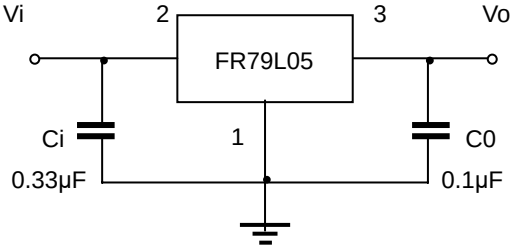
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	V_i	-30	V
Operating Junction Temperature Range	T_{OPR}	0~+125	℃
Storage Temperature Range	T_{STG}	-55~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE
(V_I=-10V,Io=40mA,Ci=0.33μF,Co=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	-4.8	-5.0	-5.2	V
		-7V≤V_I≤-20V, Io=1mA~40mA	0-125℃	-4.75	-5.0	-5.25	V
		Io=1mA~70mA		-4.75	-5.0	-5.25	V
Load Regulation	ΔVo	Io=1mA~100mA	25℃		20	60	mV
		Io=1mA~40mA	25℃		10	30	mV
Line regulation	ΔVo	-7V≤V_I≤-20V	25℃		15	150	mV
		-8V≤V_I≤-20V	25℃		12	100	mV
Quiescent Current	Iq		25℃			6	mA
Quiescent Current Change	ΔIq	-8V≤V_I≤-20V	0-125℃			1.5	mA
	ΔIq	1mA≤V_I≤40mA	0-125℃			0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		40		uV
Ripple Rejection	RR	-8V≤V_I≤-18V,f=120Hz	0-125℃	41	49		dB
Dropout Voltage	Vd		25℃		1.7		V

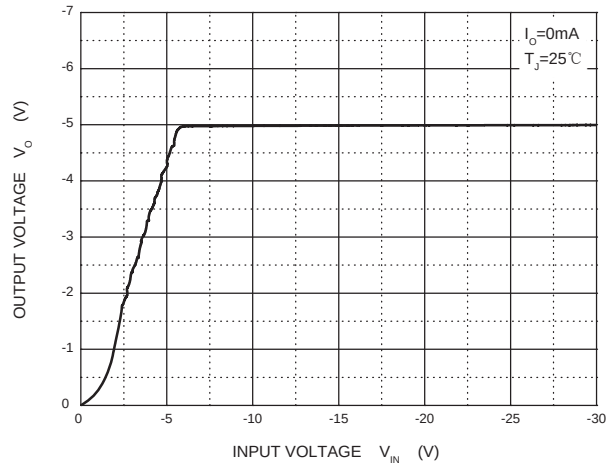
TYPICAL APPLICATION



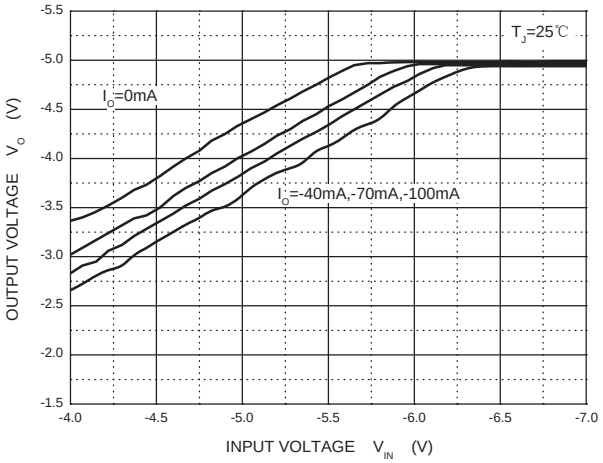
Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as Possible to the regulators.

Typical Characteristics

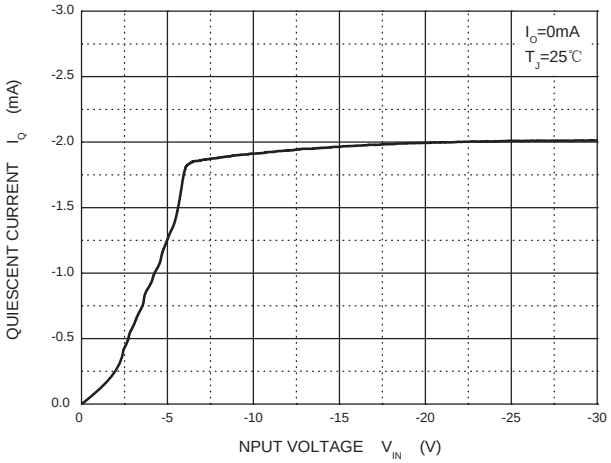
Output Characteristics



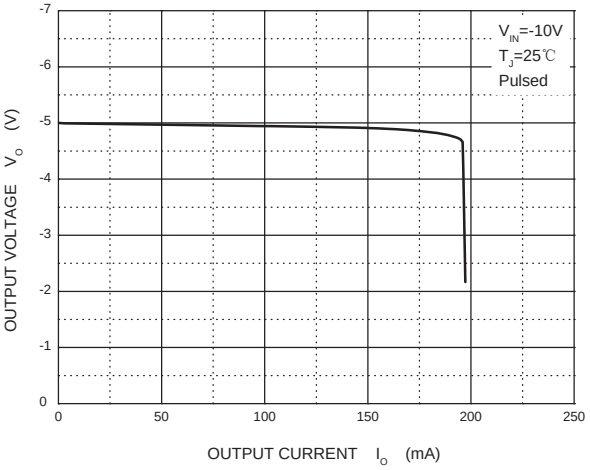
Dropout Characteristics



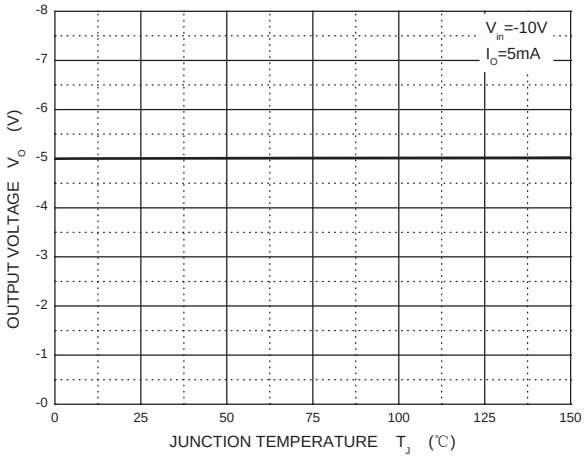
Quiescent Current vs Input Voltage



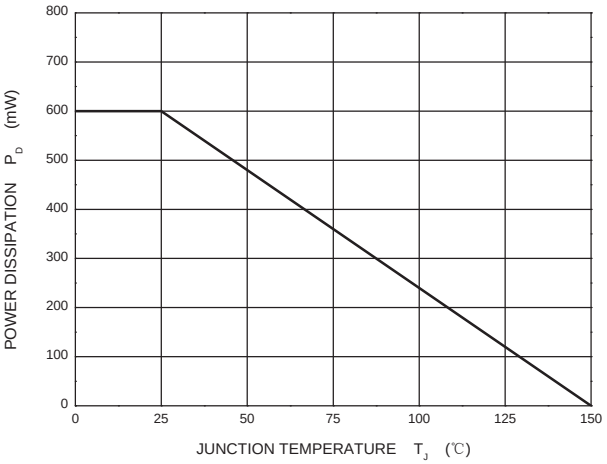
Current Cut-off Grid Voltage



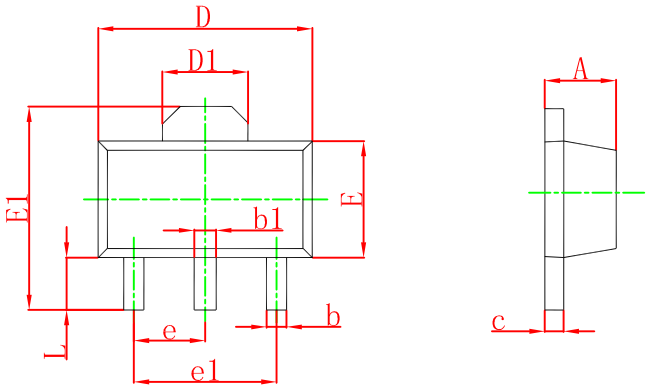
Output Voltage vs Junction Temperature



Power Derating Curve

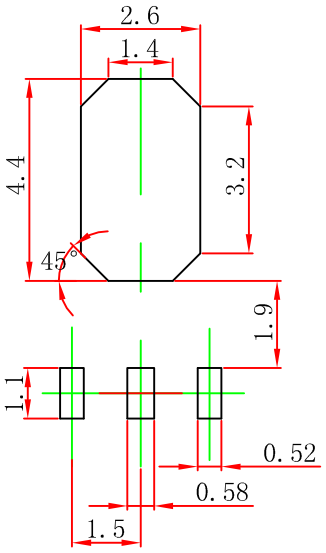


SOT-89-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4 250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1 200	0.035	0.047

SOT-89-3L Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.