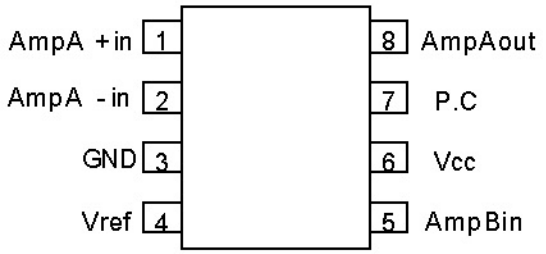
M62237FP

CONSTANT VOLTAGE CONSTANT CURRENT CONTROL IC

DESCRIPTION

M62237FP is constant voltage/current control IC with high accuracy ref. voltage(1.25V+/-1.0%) suitable for secondary side control for charger and switching power supply.
Built-in OP Amps for voltage/current control and external output terminal for current control OP Amp. allow for phase compensation.

PIN CONFIGURATION(TOP VIEW)



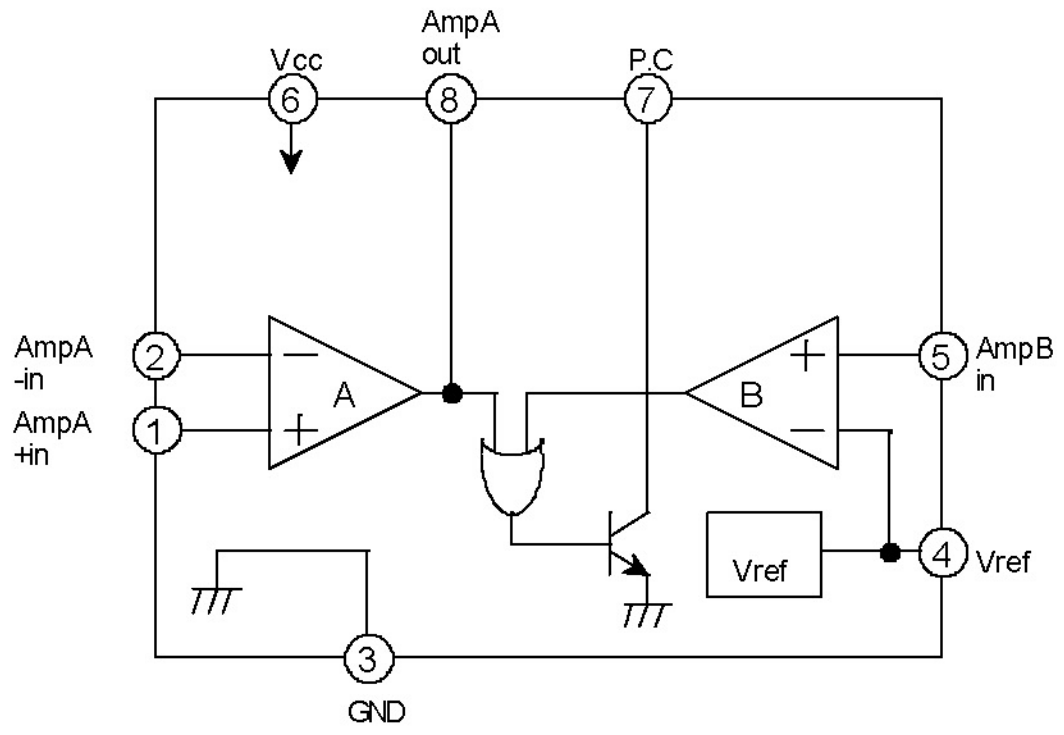
OUTLINE 8P2S-A

FEATURES

- Operating power supply voltage range——2.5-15V
- High accuracy ref. voltage————————1.25V+/-1.0%
- PC terminal output current————————20mA

APPLICATION

- Secondary side control for charger and switching power supply



ABSOLUTE MAXIMUM RATINGS(Ta=25deg.,unless otherwise specified.)

Symbol	Parameter	Conditions		Ratings	Unit
Vcc	Supply voltage			16	V
VP.C	P.C terminal voltage			16	V
IP.C	P.C terminal input current			20	mA
Iref.	Vref terminal output current			5	mA
VID	Input differential voltage		Amp.A	16	V
			Amp.B	9	V
Pd	Power dissipation			440	mW
Kθ	Thermal derating	Ta □25deg.		4.4	mW/deg.
Topr.	Operating temperature			-20~75	deg.
Tstg.	Storage temperature			-40~125	deg.

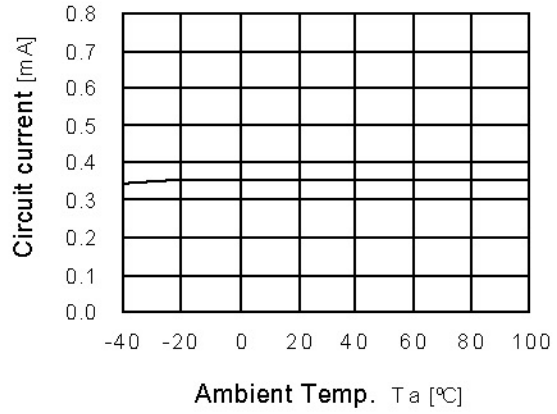
ELECTRICAL CHARACTERISTICS (Vcc=6V, Ta=25deg. unless otherwise specified.)

	Symbol	Parameter	Conditions	Ratings			Unit
				MIN.	TYP.	MAX.	
ALL	Vcc	Supply voltage		2.5	—	15	V
	Icc	Supply current	IP.C=0,Iref=0		0.8		mA
	Vref	Ref.voltage	Iref=0,IP.C=5mA	1.237	1.25	1.263	V
	△Vref	Ref.voltage regulation	Iref=0~2mA	—	10	30	mV
P.C	Vsat	P.C terminal sat. volt.	IP.C=10mA	—	0.2	0.4	V
	IP.CLEAK	P.C terminal leak current	VP.C=6V	—	—	2	μA
AMP.A(Note1)	VIO	Input offset voltage		—	0.5	2.5	mV
	IB+,IB-	Input bias current		—	-100	—	nA
	VICM	Common mode input volt.	IP.C=5mA	0	—	4.0	V
	GVO	Open voltage gain		—	80	—	dB
	CMRR	Common mode rejection ratio		—	70	—	dB
	SVRR	Supply voltage rejection ratio			70	—	dB
	SR	Slew rate		—	0.5	—	V/μsec
AMP.A(Note2)	VOM	Output voltage range		0.9	—	1.9	V
	Isource	Output source current		—	-20	—	μA
	Isink	Output sink current		—	100	—	μA
AMP.B(Note3)	VIO	Input offset voltage		—	0.5	3.0	mV
	IB+	Input bias current		—	-100	—	nA
	GVO	Open voltage gain		—	80	—	dB
	SVRR	Supply voltage rejection ratio		—	70	—	dB
	SR	Slew rate		—	0.5	—	V/μsec

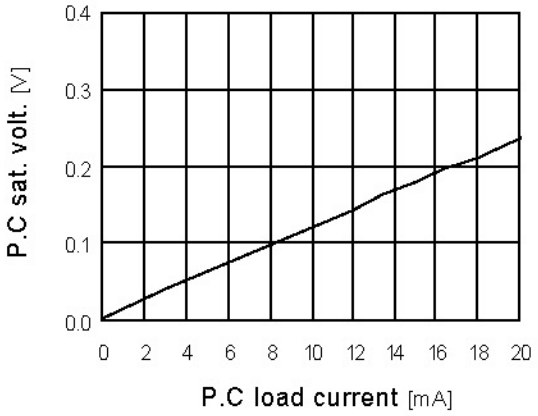
Note1. Amp A+in,-in terminal for input, PC terminal for output
Note2. Amp A+in,-in terminal for input,Amp A out terminal for output
Note3. Amp B+in,-in terminal for input, PC terminal for output

Typical characteristics(Ta=25deg., Vcc=6V unless otherwise noted.)

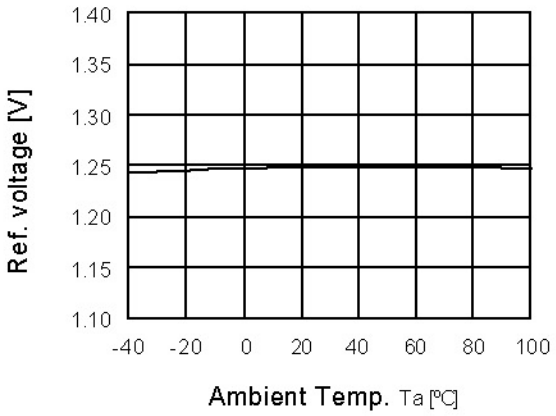
Circuit current-Ambient Temp.
(Ip.c=0mA , Iref=0mA)



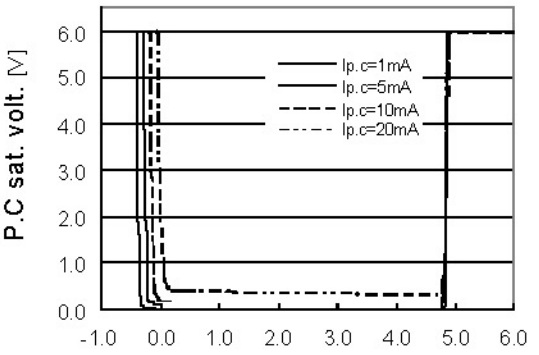
P.C sat. volt.-P.C load current



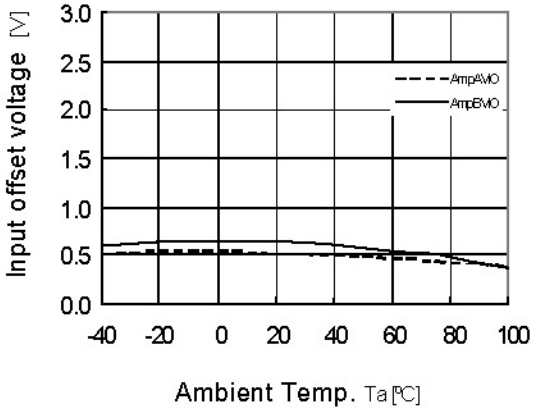
Ref. voltage-Ambient Temp.
(Iref=0mA , Ip.c=5mA)



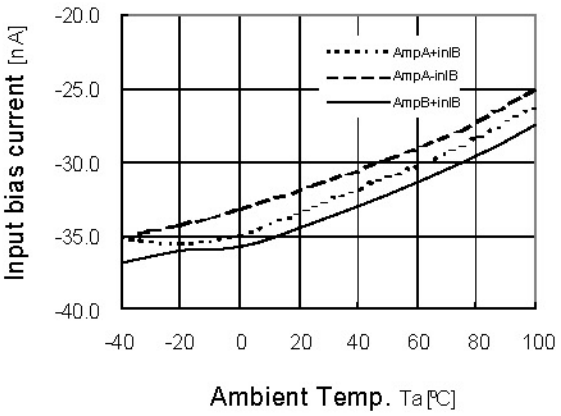
Amp.A common input voltage range



Input offset voltage-Ambient Temp.



Input bias current-Ambient Temp.



M62237FP APPLICATION DIAGRAM(with switching mode power supply)