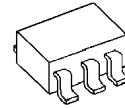


LOW DROPOUT VOLTAGE REGULATOR

■ GENERAL DESCRIPTION

The NJM2871/A, NJM2872/A are low dropout voltage regulators designed for cellular phone application. Advanced Bipolar technology achieves low noise, high ripple rejection and low quiescent current.

■ PACKAGE OUTLINE

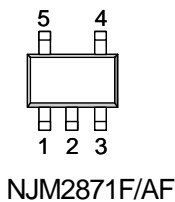


NJM2871F/AF
NJM2872F/AF

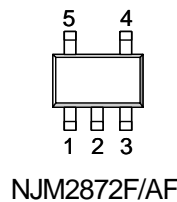
■ FEATURES

- High Ripple Rejection 70dB typ. (f=1kHz, Vo=3V Version)
- Output Noise Voltage Vno=30μVrms typ. (Cp=0.01μF)
- Output capacitor with 1.0μF ceramic capacitor (Vo≥2.7V)
- Output Current Io(max.)=150mA
- High Precision Output Vo±2%
Vo±1%:A Version
- Low Dropout Voltage 0.10V typ. (Io=60mA)
- ON/OFF Control (Active High)
- Operating Voltage Range +2.5V~+14V (Vo≤2.0V version)
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline SOT-23-5

■ PIN CONFIGURATION

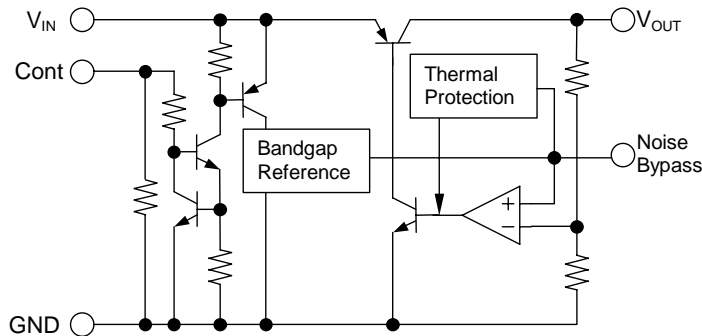


- PIN FUNCTION
1. CONTROL (Active High)
 2. GND
 3. NOISE BYPASS
 4. V_{OUT}
 5. V_{IN}



- PIN FUNCTION
1. V_{IN}
 2. GND
 3. CONTROL (Active High)
 4. NOISE BYPASS
 5. V_{OUT}

■ EQUIVALENT CIRCUIT



NJM2871/A, NJM2872/A

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT	
Input Voltage	V _{IN}	+14	V	
Control Voltage	V _{CONT}	+14(*1)	V	
Power Dissipation	P _D	SOT-23-5	350(*2)	mW
			200(*3)	
Operating Temperature	Topr	-40 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +125	°C	

(*1): When input voltage is less than +14V, the absolute maximum control voltage is equal to the input voltage.

(*2): Mounted on glass epoxy board based on EIA/JEDEC. (114.3x76.2x1.6mm: 2Layers)

(*3): Device itself.

■ Operating voltage

V_{IN}=+2.5 ~ +14V (In case of Vo<2.1V version)

■ ELECTRICAL CHARACTERISTICS

(Vo>2.0V version : V_{IN}=Vo+1V, C_{IN}=0.1μF, Co=1.0μF: Vo≥2.7V (Co=2.2μF: Vo<2.6V), Cp=0.01μF, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Voltage	Vo	Io=30mA	-2%	-	+2%	V
		Io=30mA, A Version	-1%	-	+1%	V
Quiescent Current	I _Q	Io=0mA, expect Icont	-	120	180	μA
Quiescent Current at Control OFF	I _{Q(OFF)}	V _{CONT} =0V	-	-	100	nA
Output Current	Io	Vo-0.3V	150	200	-	mA
Line Regulation	ΔVo/ΔV _{IN}	V _{IN} =Vo+1V ~ Vo+6V, Io=30mA	-	-	0.10	%/V
Load Regulation	ΔVo/ΔIo	Io=0 ~ 100mA	-	-	0.03	%/mA
Dropout Voltage	ΔV _{LO}	Io=60mA	-	0.10	0.18	V
Ripple Rejection	RR	ein=200mVrms, f=1kHz, Io=10mA Vo=3V Version	-	70	-	dB
Average Temperature Coefficient of Output Voltage	ΔVo/ΔTa	Ta=0~85°C, Io=10mA, Vo=3V Version	-	±50	-	ppm/°C
Output Noise Voltage	V _{NO}	f=10Hz~80kHz, Io=10mA, Vo=3V Version	-	30	-	μVrms
Control Voltage for ON-state	V _{CONT(ON)}		1.6	-	-	V
Control Voltage for OFF-state	V _{CONT(OFF)}		-	-	0.6	V