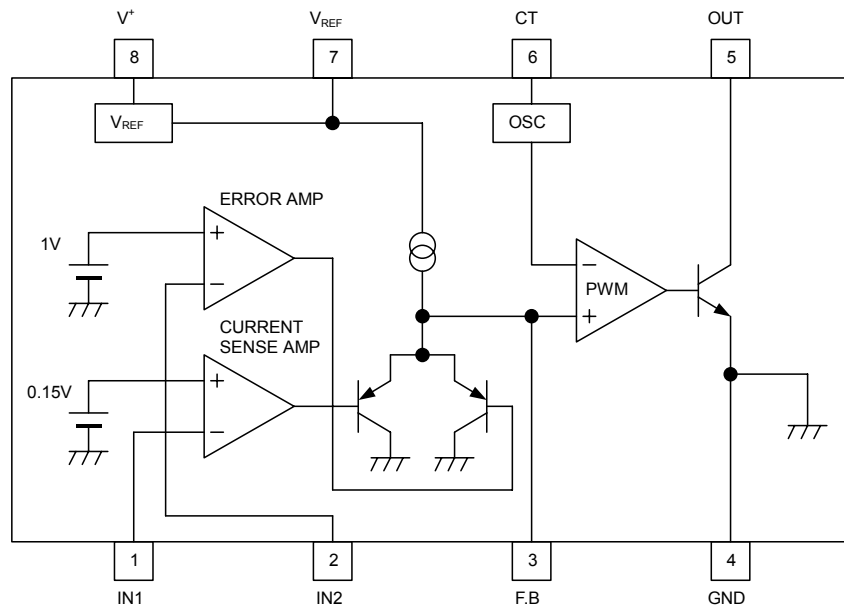


NJM2340

■BLOCK DIAGRAM



■ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Maximum Supply Voltage	V^+	36	V
Output Sink Current	I_{SINK}	15	mA
Power Dissipation	P_D	(DMP8) 300 (TVSP8) 320	mW
Operating Temperature Range	T_{opr}	-40 ~ +85	°C
Storage Temperature Range	T_{stg}	-50 ~ +150	°C

■RECOMMENDED OPERATING CONDITIONS (Ta=25°C)

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Supply Voltage	V^+	3.6	32	V
Oscillation Frequency	f_{osc}	20	500	kHz
Oscillator Timing Resistance	R_T	20	100	kΩ

■ ELECTRICAL CHARACTERISTICS ($V^+=12V, T_a=25^\circ C$)

REFERENCE VOLTAGE BLOCK

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Voltage	V_{REF}	$I_{OR}=1mA$	1.98	2.00	2.02	V
Line Regulation	L_{INE}	$V^+=3.6 \sim 32V, I_{OR}=1mA$	–	4.0	20	mV
Load Regulation	L_{OAD}	$I_{OR}=0.1 \sim 5.0mA$	–	6.0	40	mV

OSCILLATOR BLOCK

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Oscillation Frequency	f_{OSC}	$R_T=27k\Omega, C_T=220pF$	315	350	385	kHz

CURRENT SENSE AMPLIFIER BLOCK

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reference Voltage1	V_{B1}		144	150	156	mV
Input Bias Voltage1	I_{B1}		–	20	100	nA
Maximum Output Voltage1 (F.B Pin)	V_{OM+1}	$R_{NF}=100k\Omega$	–	V_{REF} -0.15	–	V
	V_{OM-1}	$R_{NF}=100k\Omega$	0.6	0.75	0.9	V
Maximum Source Current1 (F.B Pin)	I_{OM1}	$V_{OM1}=0.5V$	40	85	200	μA

ERROR AMPLIFIER BLOCK

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reference Voltage2	V_{B2}		0.985	1.000	1.015	V
Input Bias Voltage2	I_{B2}		–	20	100	nA
Maximum Output Voltage2 (F.B Pin)	V_{OM+2}	$R_{NF}=100k\Omega$	–	V_{REF} -0.15	–	V
	V_{OM-2}	$R_{NF}=100k\Omega$	0.6	0.75	0.9	V
Maximum Source Current2 (F.B Pin)	I_{OM2}	$V_{OM2}=0.5V$	40	85	200	μA

PWM COMPARE BLOCK

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Threshold Voltage (F.B Pin)	V_{TH0}	duty-cycle=0% (note)	V_{OM-}	1.0	1.1	V
Input Threshold Voltage (F.B Pin)	V_{TH100}	duty-cycle=100% (note)	–	1.4	–	V

OUTPUT BLOCK

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
L Output Voltage (OUT Pin)	V_{OL}	$I_{SINK}=10mA$	–	0.5	0.7	V

GENERAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Average Quiescent Current	I_{CCAV}	$R_L=\infty, \text{duty-cycle}=50\%$	–	1.5	2.0	mA

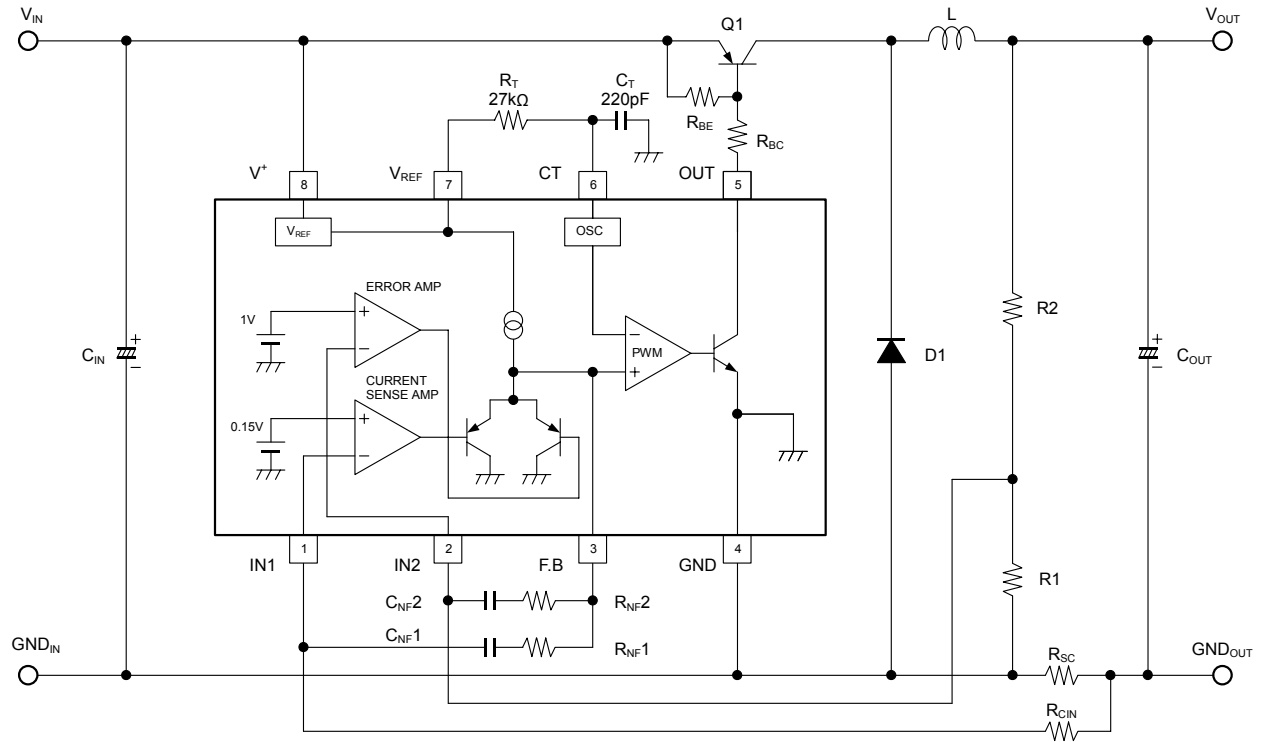
(note) Duty-Cycle is defined as follows:

Duty-Cycle=0%: IC output transistor is OFF.

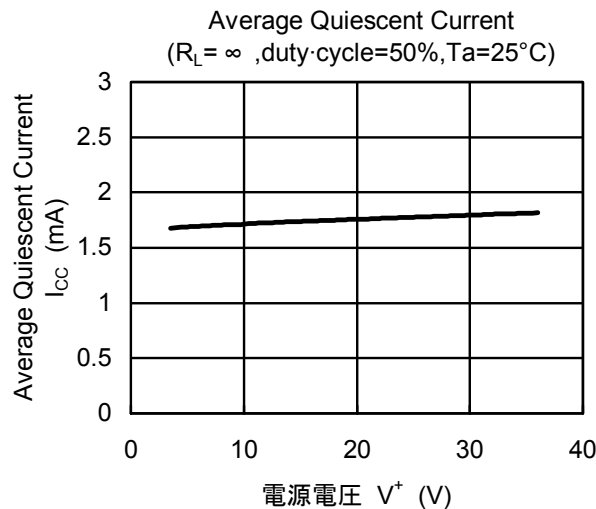
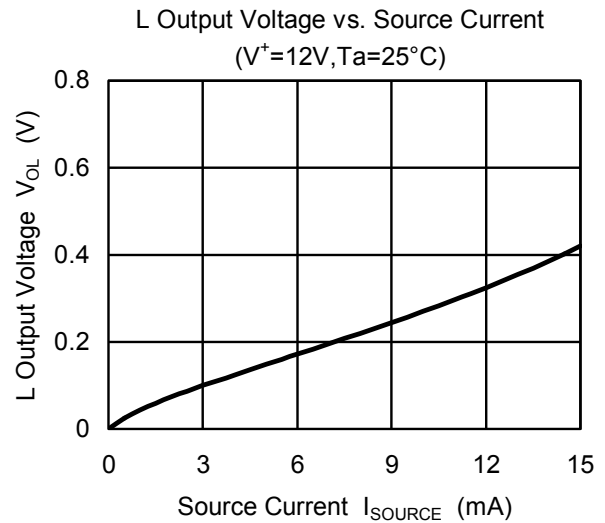
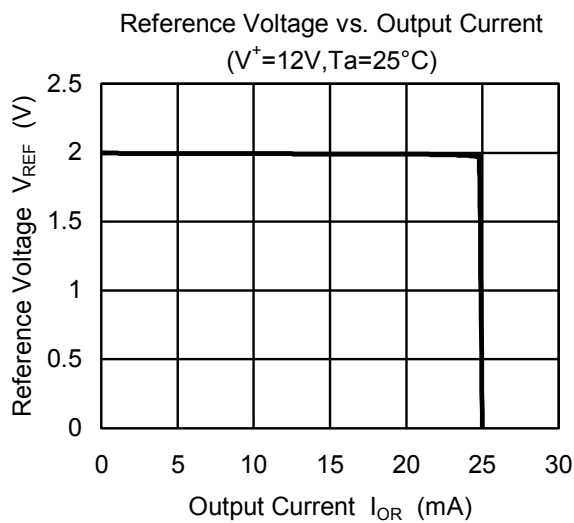
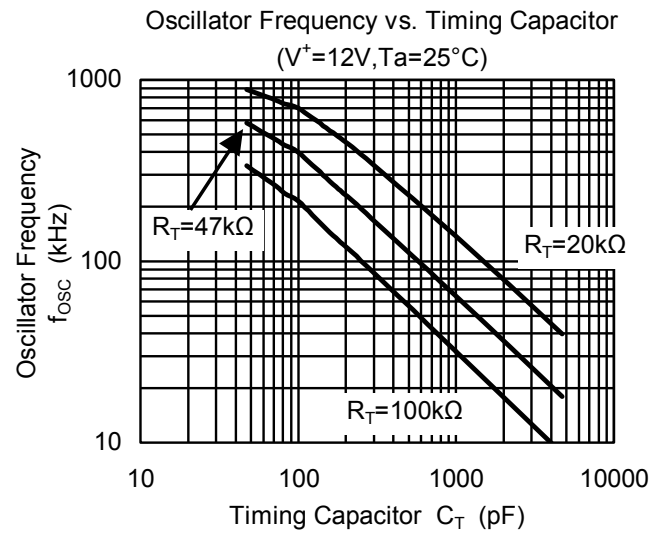
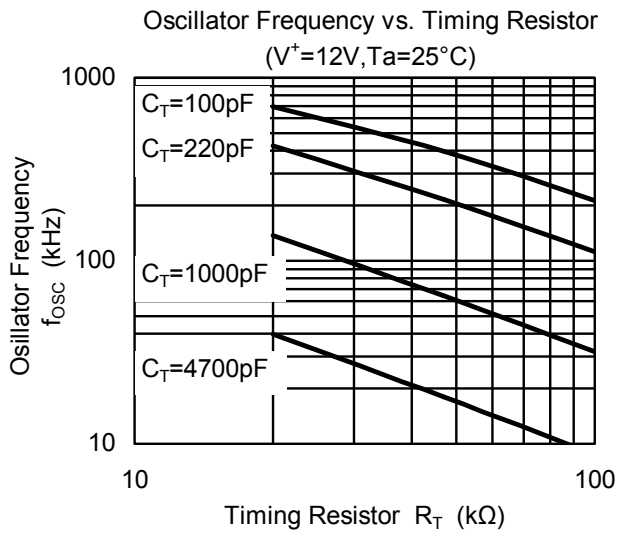
Duty-Cycle=100%: IC output transistor is ON.

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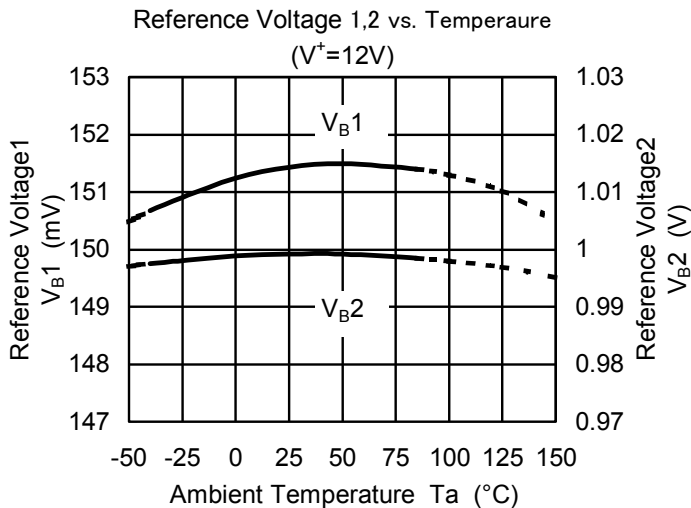
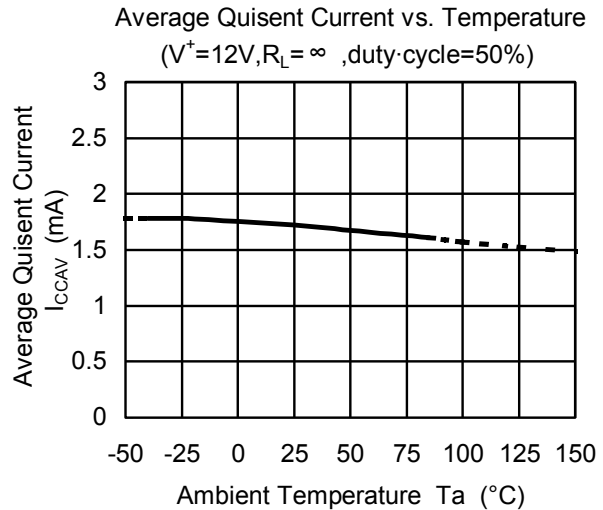
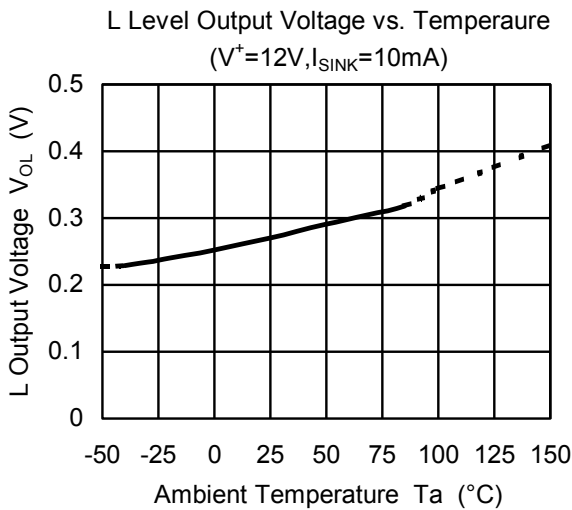
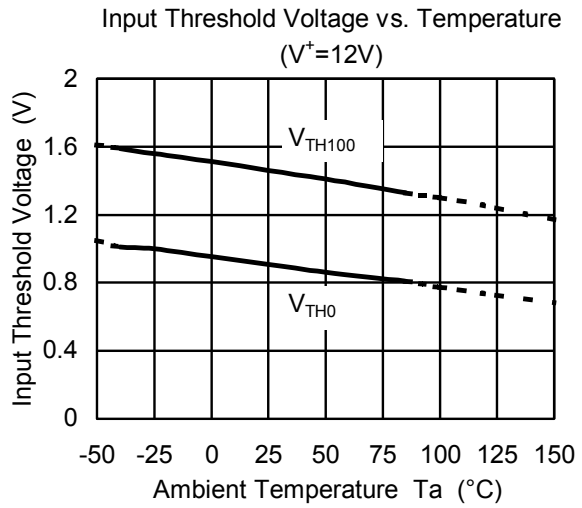
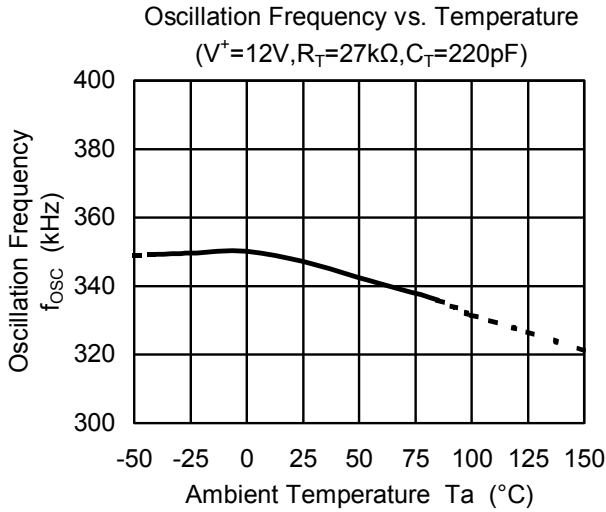
■ TYPICAL APPLICATION



■ TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS



[CAUTION]
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