

FEATURES

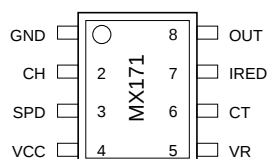
- Package : 8-pin SOP, 8-pin DIP
- Operating voltage : 2.2V~6V
- Operating temperature : -25°C~60°C
- Supply current : max. 10mA (without output current)
- Surround light level : max. 20uA (SPD output current)
- IRED drive output : min. 15mA
- Magnet drive current : min. 300mA
- Measuring time : max. 30ms

DESCRIPTION

MX171 is designed for Amplitude system auto focus cameras. It is regarded as input component for SPD (Silicon Photo Detector), and comprises of circuits that drive AF magnet as output, an infrared emission diode current control circuit, and control circuit of sequential timing.

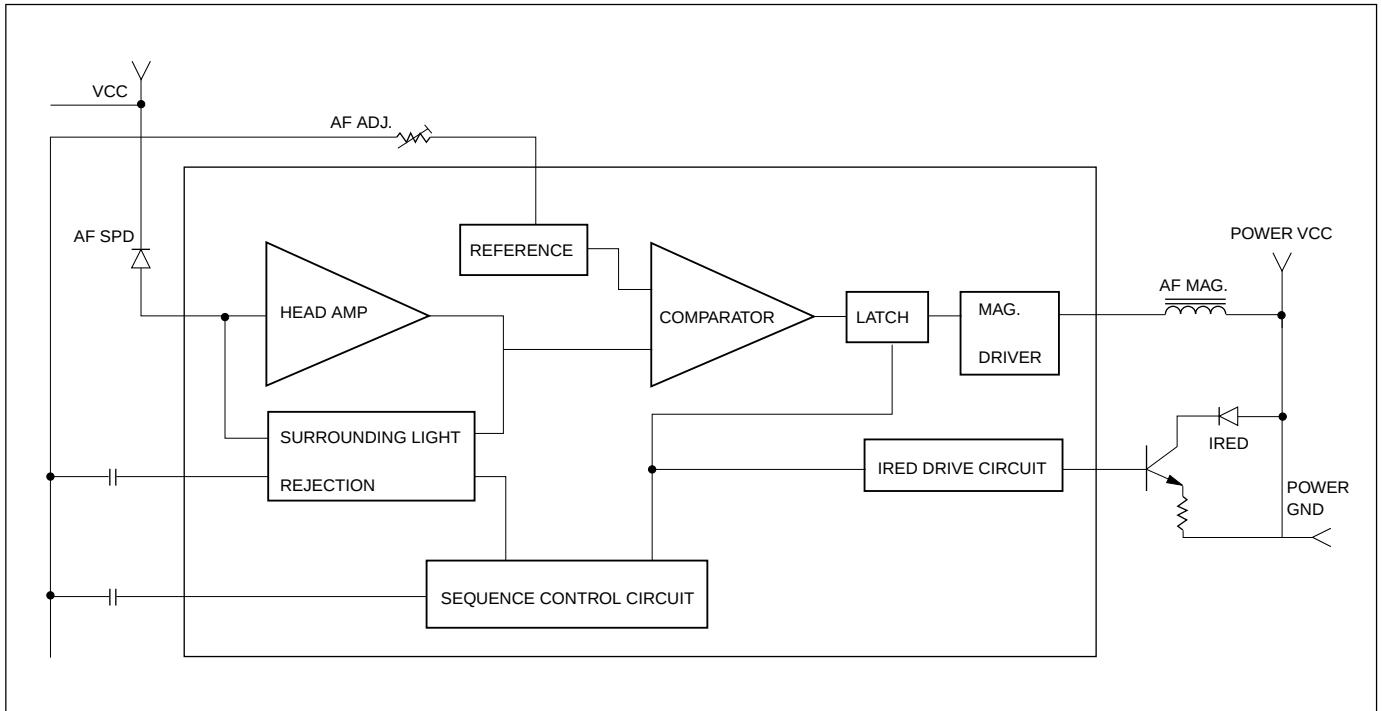
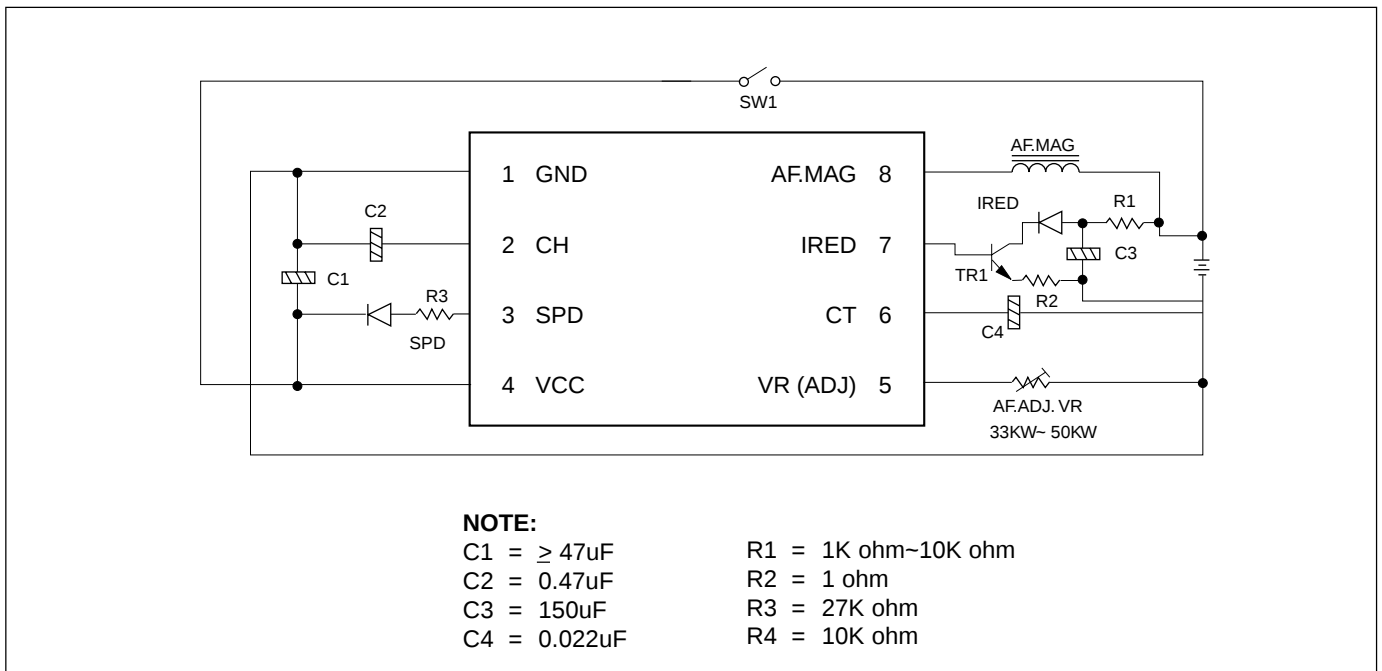
PIN CONFIGURATION

8 SOP



PIN FUNCTIONS

SYMBOL	PIN NAME
GND	Ground Pin
CH	Hold Capacitor Pin
SPD	SPD Input Pin
VCC	Supply Pin
VR	VR Pin for Adjustment
CT	Timing Capacitor
IRED	Output Control for IRED
OUT	Data Output Pin

BLOCK DIAGRAM

BASIC CONNECTION DIAGRAM


ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER	RATING	UNIT	CONDITION
VCC	Supply Voltage	-0.3~6.0	V	
PD	Power Dissipation	550	mW	TA≤5°C
PDR	Power Dissipation Ratio	-5.5	mW/°C	TA>25°C
VIN	Input Voltage	-0.3~VCC+0.3	V	
BVOC	Output Voltage	-0.3~6.0	V	
IOUT	Output Current	400	mA	
TOPR	Operating Temperature 1	-25~+60	°C	(NOTE)
TOPR	Operating Temperature 2	-10~+50	°C	
TSTG	Storage Temperature	-55~+150	°C	

NOTE: The operating temperature 1 range expresses the qualitative operating temperature range but it does not guarantee characteristics.

DC CHARACTERISTICS (TA = 25°C, VCC = 2.2V, 3.0V, 6.0V)
SUPPLY CURRENT

SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT	CONDITION
ICC1	Quick Charge State (Charge)	1.5	3.2	5.5	mA	
ICC2	Quick Charge State (Discharge)	1.8	3.1	6.0	mA	
ICC3	Steady State (Charge)	1.2	2.2	4.2	mA	
ICC4	Steady State (Discharge)	1.2	2.1	4.0	mA	
ICC5	IRED Flashing State	1.2	2.2	4.0	mA	
ICC6	Finish State		16.0	40.0	mA	output "on"

TIMING CIRCUIT

SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT	CONDITION
ICT	CT Charge Current	0.8	1.3	1.8	uA	
RCT	Discharge Resistance	4.5	7.3	10.0	K ohm	
VTH1	Threshold Voltage1	640	680	720	mV	
VTH2	Threshold Voltage2	1250	1350	1450	mV	

HEAD AMPLIFIER/ADJUSTMENT CIRCUIT

SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT	CONDITION
VIN	Input Voltage	620	660	700	mV	
ISDMX	Max. Surround Light	13.0	32.0		uA	
VRADJ	Resistor Range	0.45		200	K ohm	
RON	Adjust Resistance (ON)	4.5			K ohm	Iin=50uA
ROFF	Adjust Resistance (OFF)			0.47	K ohm	

HOLD CAPACITOR CHARGE/DISCHARGE CURRENT

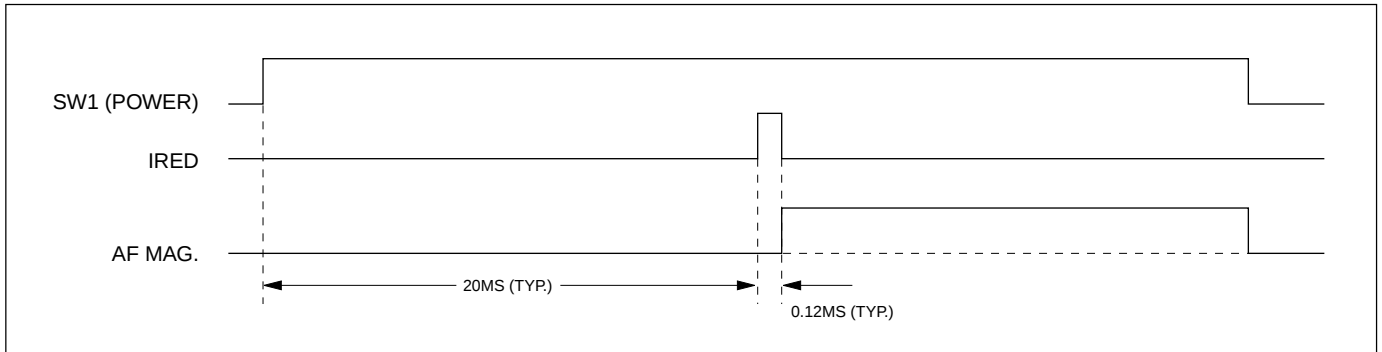
SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT	CONDITION
ICH1	Quick Charge Current	-460	-770	-1200	uA	
ICH2	Quick Discharge Current	460	770	1200	uA	
ICH3	Steady Charge Current	-7	-11	-15	uA	
ICH4	Steady Discharge Current	7	11	15	uA	
ICH5	CH Input Current	20	35	100	nA	

DATA OUTPUT TERMINAL

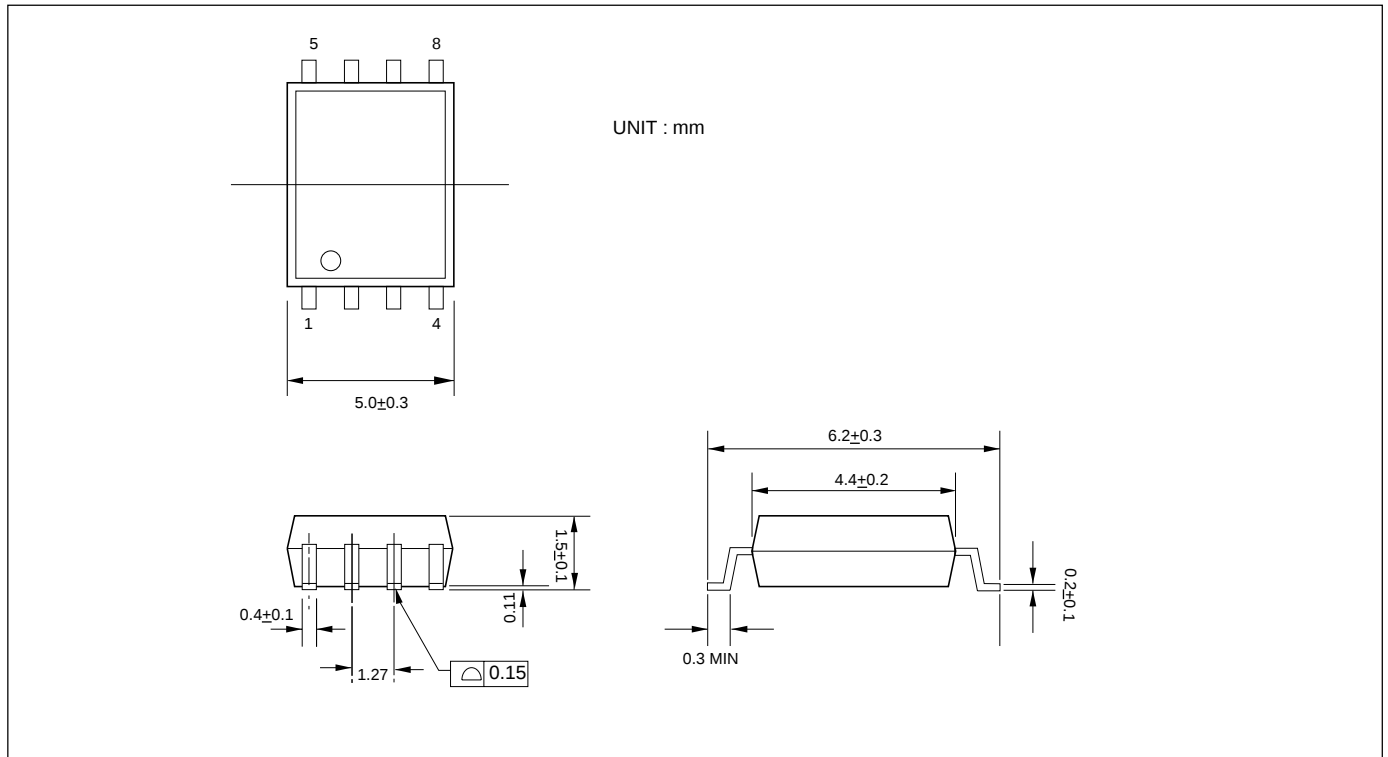
SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT	CONDITION
IOUTLK	Output Leak Current			1.0	uA	VO = 7.0V
VOUSAT	Saturation Voltage		460	500	mV	IO = 300 mA
IOUTMX	Max. Output Current	300			mA	
VOUMX	Max. Voltage	6.0	8.0	10.0	V	IO = 300 mA

IRED FLASHING CONTROL CIRCUIT

SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT	CONDITION
VIRED1	IRED Voltage (ON)	920	980	1030	mV	
VIRED2	IRED Voltage (OFF)	230	270	310	mV	
IIREDMX	Max. Output Current	15.0	32.0		mA	

TIMING WAVEFORM

ORDERING INFORMATION

PART NO.	PACKAGE
MX171MC	8 pin SOP
MX171PC	8 pin PDIP

PACKAGE INFORMATION
8 PIN PLASTIC SOP




MX171

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