

MM240 DATASHEET

Sound Tracking Tri-Colour-LED Flasher

Features

- Wide operating voltage: 2.4V-5.1V
- Built-in tri-colour-LED driver with variable intensity
- Background colour variation option

- General Description

AMOS MM240 provides a low cost single chip solution for detecting music dynamics and response with tri-colour LED flashes in variable intensity. LED intensity varies with the incoming sound picked up by the piezo-buzzer. MM240 starts operate upon power up, and flashes, if there is any sound detected. If no sound is detected, MM240 transverse the LED colour in background.

Sensitivity is related to the mechanical construction and efficiency of the piezo-buzzer and may need final adjustment depending on the mechanical constructions and the desirable effect.

Pin Definition

Pin#	Pin Name	Function
1	LEDB	Connects to LED.
2	LEDG	Connects to LED.
3	LEDR	Connects to LED.
4	DUTY	Test pin.
5	TC	Test pin.
6	TESTBG	Connects to negative terminal of power supply.
7	OSCR	Test pin
8	AD2	Test pin
9	AD1	Test pin
10	AD0	Test pin
11	VADMIN	Connects to RADMIN
12	VADMAX	Connects to positive terminal of power supply.
13	VADIN	Connects to CPK
14	VAGC	Connects to CAGC
15	CAGC	Connects to CAGC
16	VOMAX	Connects to RVOMAX
17	CPKIN	Connects to CPK
18	CPK	Connects to CPK
19	VOUT2	Connects to RG2
20	G2	Connects to RG2
21	VIN2	Connects to CIN2
22	VOUT1	Connects to RG1
23	G1	Connects to RG1
24	VIN1	Connects to CIN1

25	VREF	AC ground
26	VDD	Connects to positive terminal of power supply.
27	BUZ	Connects to buzzer.
28	VSSA	Connects to negative terminal of power supply.
29	VSS	Connects to negative terminal of power supply.

Electrical Characteristics

Absolute Maximum Ratings

V_{SS}=0V, ambient temp. = 25 degree C

PARAMETER	SYMBOL	TEST CONDITIONS OR COMMENTS	LIMITS	UNIT
Supply Voltage	V _{DD}	-	-0.3 to 5.1	V
Input Voltage	V _{IN}	-	-0.3 to V _{DD} + 0.3	V
Operation Temperature	T _{OP}	-	0 to 55	Deg C
Storage Temperature	T _{ST}	-	-25 to 125	Deg C

Absolute Maximum Rating are values beyond which the safety of the device cannot be guaranteed.

A.C. & D.C. Characteristics

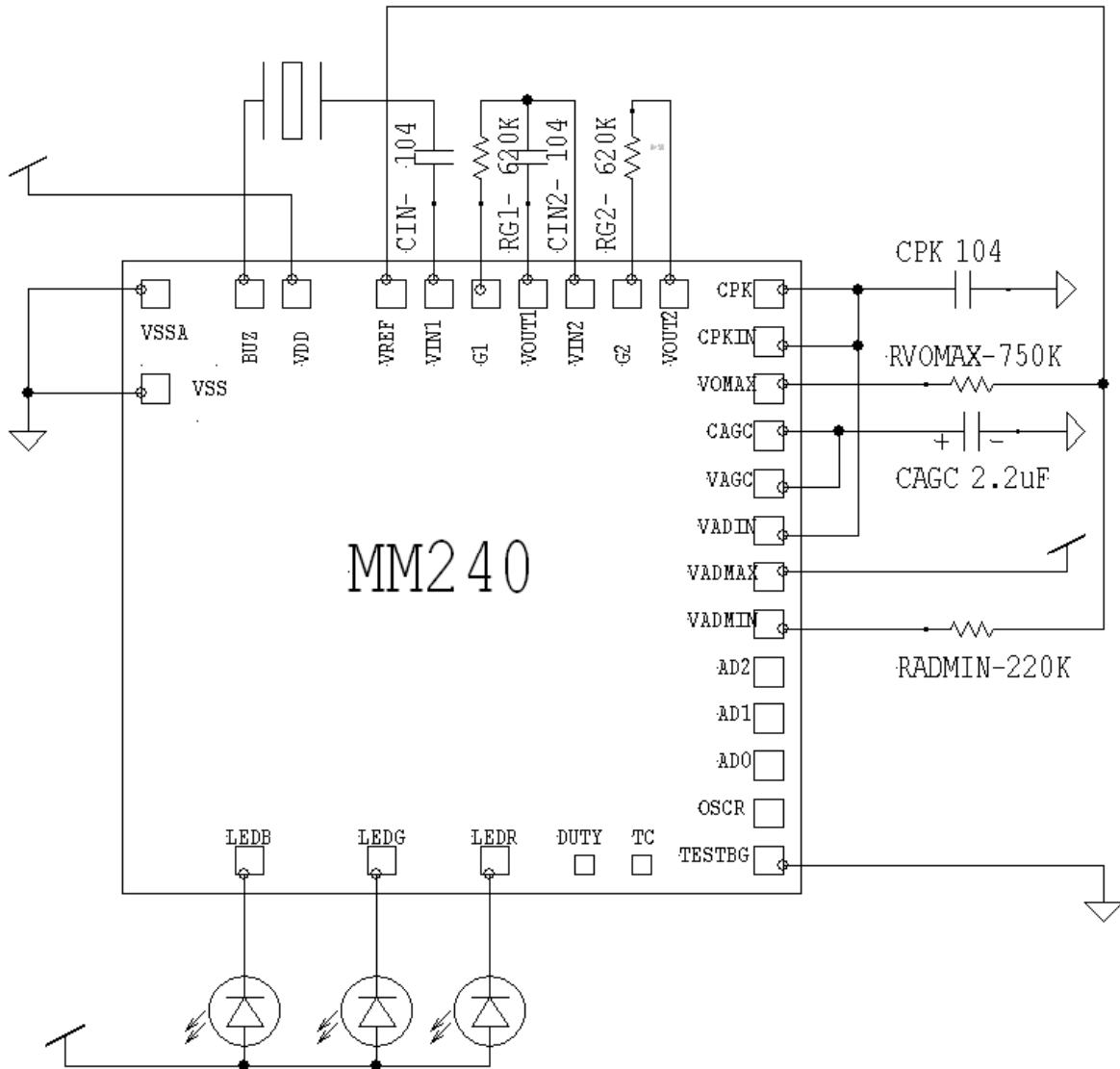
V_{DD} = 3.0V, V_{SS} = 0V, ambient temperature = 25 Degree C (unless otherwise specified).

PARAMETER	SYMBOL	TEST	LIMITS			
			MIN	TYP	MAX	
Operating Voltage	V _{DD} - V _{SS}	-	2.4	3.0	5.1	V
Operating Current	I _{DD} (1)	V _{AGC} =0V	-	100	-	uA
Oscillation Frequency	F _{OSC}	-	-	128	-	kHz
Input High Voltage	V _{IH}	-	V _{DD} - 0.3	-	V _{DD}	V
Input Low Voltage	V _{IL}	-	V _{SS}	-	V _{SS} + 0.3	V
LEDR/G/B Output Current (IOL)	I _{LED}	V _{OL} =0.5V	-	10	-	mA

AMOS reserves the right to make changes in the circuitry and specification of the chip without notice, customers are advised to check AMOS on the latest information.

Note 1: Supply current is measured with oscillator running.

Typical Application Diagram



Remark : Substrate connects to Vdd.