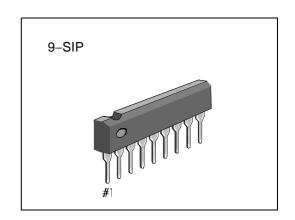
INTRODUCTION

The S1A2284A01 and S1A2284A02 are monolithic integrated circuits designed for 5-dot LED level meter drivers with a built-in rectifying amplifier. It is suitable for AC/DC level meters such as VU meters or signal meters.

FEATURES

- High gain rectifying amplifier included (G_V = 26dB)
- Low radiation noise when LED turns on
- Logarithmic indicator for 5-dot bar type LED (-10, -5, 0, 3, 6dB)
- Constant current output
 S1A2284A01: lo = 15mA (Typ)
 S1A2284A02: lo = 7mA (Typ)
- Wide operating supply voltage range:
 V_{CC} = 3.5V 1 6V
- · Minimum number of external parts required

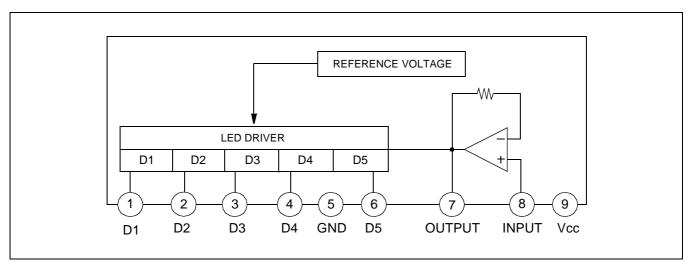


ORDERING IN FORMATION

Device	Package	Operating Temperature	I _D
S1A2284A01-I0U0	9–SIP – 20°C – + 80°C		15mA
S1A2284A02-I0U0	3 011	20 0 1 00 0	7mA



BLOCK DIAGRAM



NOTE: Capacitor to be omitted when used as a DC input signal meter

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V _{CC}	18	V
Amp Input Voltage	V ₈₋₅	-0.5 - V _{CC}	V
Pin 7 Voltage	V ₇₋₅	6	V
D Terminal Output Voltage	V _D	18	V
Circuit Current	I _{CC}	12	mA
D Terminal Output Current	I _D	20	mA
Power Dissipation	P _d	1100	mW
Operating Temperature	T _{OPR}	-20 - + 80	°C
Storage Temperature	T _{STG}	-40 - + 125	°C

NOTE: $11 \text{mW/}^{\circ}\text{C}$ is decreased at higher temperature than $T_a = 25^{\circ}\text{C}$.



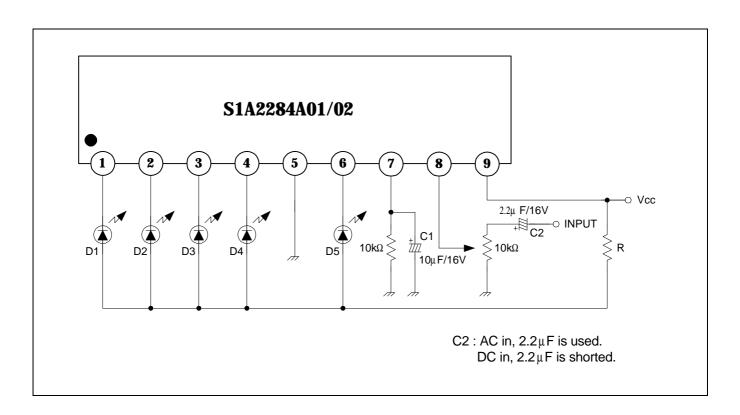
ELECTRICAL CHARACTERISTICS

 $(T_a = 25^{\circ}C, V_{CC} = 6V, f = 1kHz, unless otherwise specified)$

Charact	eristic		Symbol	Test Conditions	Min.	Тур.	Max.	Unit
Circuit Current			I _{CCQ}	V _i = 0V	_	6	8.5	mA
D Output Current	S1A2	284A01	I _O	V _i = 0.15V	11	15	18.5	mA
	S1A2	284A02			5	7	9.5	
Input Bias Current			I _{BIAS}	_	-1	_	0	μΑ
Amp Gain			G _V	V _I = 0.1 V	24	26	28	dB
Comparator ON Level V _{CL (C}			V _{CL(ON)1}	-	-12	-10	-8	dB
		el V _{CL} (ON)	V _{CL(ON)2}		-6	-5	-4	
			V _{CL(ON)3}		_	0	_	
			V _{CL(ON)4}		2.5	3	3.5	
			V _{CL(ON)5}		5	6	7	

 $\textbf{NOTE} : \text{Definition of 0dB: input voltage level when V}_{\text{CL (ON)3}} \text{ turn ON (50mV)}$

TEST CIRCUIT



The recommended value of R at T_a (max) = 60° C.

V _{CC} (V)	8 – 12	10 –14	12 – 16
$R(\Omega)$	47	68	91

By changing the time constant C_1 and C_2 , the response, attack and release time may be varied. In the above application conditions, power dissipation may be operated at higher levels than the absolute maximum ratings. The wattage of R is to be determined by the total LED current and R value recommended by the R table.

