



Product Group: Vishay Siliconix/ November 17th, 2021 - APCN-SIL-5022021

### SIC461-4 and SIC471-4 Datasheet Changes

**DESCRIPTION OF CHANGE:** Correction of the minimum VDRV Supply voltage from 5.1V to 4.75V, and Maximum VDRV current from 50mA to 30mA. Datasheets change on Page 4.

**CLASSIFICATION OF CHANGE: Datasheet** 

**REASON FOR CHANGE:** Correction

EXPECTED INFLUENCE ON PERFORMANCE/QUALITY/RELIABILTY: There will be no effect on

performance, quality or reliability.

PRODUCT CATAGORY: ICs

**PART NUMBERS AFFECTED:** SIC461ED-T1-GE3, SIC462ED-T1-GE3, SIC463ED-T1-GE3, SIC464ED-T1-GE3, SIC471ED-T1-GE3, SIC472ED-T1-GE3, SIC473ED-T1-GE3, SIC474ED-T1-

GE3

VISHAY BRAND(s): Vishay-Siliconix

TIME SCHEDULE: Immediately, November 17, 2021

**SAMPLE AVAILABILITY:** Samples available immediately

**QUALIFICATION DATA:** See details in attachment

This APCN is for notification purposes only. Your response is not required. If you have any questions, please contact your local Vishay Sales Office.

**ISSUED BY:** Isabelle Ciacchella, Vishay Siliconix IC Product Marketing.

E-mail address: isabelle.ciacchella@Vishay.com

For further information, please contact your regional Vishay office.

The Americas Europe A
Vishay Americas Vishay Electronic GmbH V

2585 Junction Avenue Geheimrat-Rosenthal-Strasse 100
San Jose, CA 95134 D-95100

T: 408-970-8000 Selb, Germany F: 408-567-8942 T: 49-9287-71 0

business-americas@vishay.com <u>Europe@vishay.com</u>

Asia

Vishay Intertechnology Asia Pte. Ltd 25 Tampines Street 92 #02-00 Keppel Building

#02-00 Keppel Buildii Singapore 528877 T: 65-6788-6668

business-asia@vishay.com

Vishay Intertechnology, Inc.





Product Group: Vishay Siliconix/ November 17th, 2021 - APCN-SIL-5022021

### SIC461/2/3/4 Datasheet – Doc#65124

## Revision O – March 2021

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Power Supplies						
V <sub>DD</sub> supply	V	$V_{IN} = V_{CIN} = 6 \text{ V to } 60 \text{ V}$ 4.75	5	5.25	V	
	V <sub>DD</sub>	$V_{IN} = V_{CIN} = 5 \text{ V}$	4.7	5	-	V
V <sub>DD</sub> dropout	V <sub>DD_DROPOUT</sub>	$V_{IN} = V_{CIN} = 5 V$ , $I_{VDD} = 1 mA$		70	-	mV
V <sub>DD</sub> UVLO threshold, rising	V <sub>DD_UVLO</sub>		4	4.25	4.5	V
V <sub>DD</sub> UVLO hysteresis	V <sub>DD_UVLO_HYST</sub>		-	225	-	mV
Maximum V <sub>DD</sub> current	I <sub>DD</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 60 \text{ V}$	3	127	-	mA
V <sub>DRV</sub> supply	V <sub>DRV</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 60 \text{ V}$	5.1	5.3	5.55	V
		$V_{IN} = V_{CIN} = 5 \text{ V}$	4.8	5	5.2	V
V <sub>DRV</sub> dropout	V <sub>DRV_DROPOUT</sub>	$V_{IN} = V_{CIN} = 5 \text{ V}, I_{VDD} = 10 \text{ mA}$	2	160	-	mV
Maximum V <sub>DRV</sub> current	V <sub>DRV</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 60 \text{ V}$	50	275	(74)	mA
V <sub>DRV</sub> UVLO threshold, rising	V <sub>DRV_UVLO</sub>		4	4.25	4.5	V
V <sub>DRV</sub> UVLO hysteresis	V <sub>DRV_UVLO_HYST</sub>		-	295	-	mV
Input current	I <sub>VCIN</sub>	Non-switching, V <sub>FB</sub> > 0.8 V	-	235	325	
Shutdown current	IVCIN SHON	V <sub>FN</sub> = 0 V	-	4	8	μА

### Revision P – November 2021

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TVD	MAN	LIMIT
PARAMETER	SYMBOL	TEST CONDITIONS	WIIN.	TYP.	MAX.	UNIT
Power Supplies						
V <sub>DD</sub> supply	V <sub>DD</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 60 \text{ V}$	4.75	5	5.25	V
		$V_{IN} = V_{CIN} = 5 \text{ V}$	4.7	5		V
V <sub>DD</sub> dropout	V <sub>DD_DROPOUT</sub>	$V_{IN} = V_{CIN} = 5 \text{ V}, I_{VDD} = 1 \text{ mA}$	(2)	70	=	mV
V <sub>DD</sub> UVLO threshold, rising	V <sub>DD_UVLO</sub>		4	4.25	4.5	V
V <sub>DD</sub> UVLO hysteresis	V <sub>DD_UVLO_HYST</sub>		1-1	225	-	mV
Maximum V <sub>DD</sub> current	I <sub>DD</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 60 \text{ V}$	3	1177		mA
V <sub>DRV</sub> supply	V <sub>DRV</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 60 \text{ V}$	4.75	5.3	5.55	V
		$V_{IN} = V_{CIN} = 5 \text{ V}$	4.8	5	5.2	V
V <sub>DRV</sub> dropout	V <sub>DRV_DROPOUT</sub>	$V_{IN} = V_{CIN} = 5 \text{ V}, I_{VDD} = 10 \text{ mA}$	-	160	-	mV
Maximum V <sub>DRV</sub> current	$V_{DRV}$	$V_{IN} = V_{CIN} = 6 \text{ V to } 60 \text{ V}$	30	1377	75	mA
V <sub>DRV</sub> UVLO threshold, rising	V <sub>DRV_UVLO</sub>		4	4.25	4.5	V
V <sub>DRV</sub> UVLO hysteresis	V <sub>DRV_UVLO_HYST</sub>		180	295	-	mV
Input current	I <sub>VCIN</sub>	Non-switching, V <sub>FB</sub> > 0.8 V	-	235	325	μА
Shutdown current	I <sub>VCIN_SHDN</sub>	$V_{FN} = 0 \text{ V}$	25	4	8	

Vishay Intertechnology, Inc.





Product Group: Vishay Siliconix/ November 17th, 2021 - APCN-SIL-5022021

# **SIC471/2/3/4 Datasheet – Doc#75786**

### Revision F – March 2021

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Power Supplies						
V <sub>DD</sub> supply	V-	V <sub>IN</sub> = V <sub>CIN</sub> = 6 V to 55 V 4.75	5	5.25	V	
	V <sub>DD</sub>	$V_{IN} = V_{CIN} = 5 V$	4.7	5	~	V
V <sub>DD</sub> dropout	V <sub>DD_DROPOUT</sub>	$V_{IN} = V_{CIN} = 5 \text{ V}, I_{VDD} = 1 \text{ mA}$	-	70	=	mV
V <sub>DD</sub> UVLO threshold, rising	V <sub>DD_UVLO</sub>		4	4.25	4.5	٧
V <sub>DD</sub> UVLO hysteresis	V <sub>DD_UVLO_HYST</sub>		2	225	2	mV
Maximum V <sub>DD</sub> current	I <sub>DD</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 55 \text{ V}$	3	-	- 4	mA
V <sub>DRV</sub> supply	V <sub>DRV</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 55 \text{ V}$	5.1	5.3	5.55	V
		$V_{IN} = V_{CIN} = 5 \text{ V}$	4.8	5	5.2	V
V <sub>DRV</sub> dropout	V <sub>DRV_DROPOUT</sub>	$V_{IN} = V_{CIN} = 5 \text{ V}, I_{VDD} = 10 \text{ mA}$	-	160	2	mV
Maximum V <sub>DRV</sub> current	V <sub>DRV</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 55 \text{ V}$	50	- 4	14	mA
V <sub>DRV</sub> UVLO threshold, rising	V <sub>DRV_UVLO</sub>		4	4.25	4.5	V
V <sub>DRV</sub> UVLO hysteresis	V <sub>DRV_UVLO_HYST</sub>		-	295	2	mV
Input current	I <sub>VCIN</sub>	Non-switching, V <sub>FB</sub> > 0.8 V	-	235	325	200
Shutdown current	IVCIN SHDN	V <sub>EN</sub> = 0 V	+	4	8	μA

#### Revision G – November 2021

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Power Supplies	-					
V <sub>DD</sub> supply	V	$V_{IN} = V_{CIN} = 6 \text{ V to } 55 \text{ V}$	4.75 5	5.25	V	
	V <sub>DD</sub>	$V_{IN} = V_{CIN} = 5 \text{ V}$	4.7	5	-	V
V <sub>DD</sub> dropout	V <sub>DD_DROPOUT</sub>	$V_{IN} = V_{CIN} = 5 \text{ V}, I_{VDD} = 1 \text{ mA}$	=	70	=	mV
V <sub>DD</sub> UVLO threshold, rising	V <sub>DD_UVLO</sub>		4	4.25	4.5	V
V <sub>DD</sub> UVLO hysteresis	V <sub>DD_UVLO_HYST</sub>		-	225	-	mV
Maximum V <sub>DD</sub> current	I <sub>DD</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 55 \text{ V}$	3	-	-	mA
V <sub>DRV</sub> supply	V <sub>DRV</sub>	$V_{IN} = V_{CIN} = 6 \text{ V to } 55 \text{ V}$	4.75	5.3	5.55	V
		$V_{IN} = V_{CIN} = 5 V$	4.8	5	5.2	V
V <sub>DRV</sub> dropout	V <sub>DRV_DROPOUT</sub>	$V_{IN} = V_{CIN} = 5 \text{ V}, I_{VDD} = 10 \text{ mA}$	-	160	=	mV
Maximum V <sub>DHV</sub> current	V <sub>DRV</sub>	$V_{IN} = V_{CIN} = 6 V \text{ to } 55 V$	30	(5)	= =	mA
V <sub>DRV</sub> UVLO threshold, rising	V <sub>DRV_UVLO</sub>		4	4.25	4.5	٧
V <sub>DRV</sub> UVLO hysteresis	V <sub>DRV_UVLO_HYST</sub>		-	295	- 5	mV
Input current	I <sub>VCIN</sub>	Non-switching, V <sub>FB</sub> > 0.8 V	-	235	325	
Shutdown current	IVCIN SHDN	V <sub>EN</sub> = 0 V	250	4	8	μΑ

Vishay Intertechnology, Inc.