


**SANYO SiP** (System in Package) *technology*

# ISB

(Integrated System in Board)

## ISB-A40-0 — Ultrathin Miniature Package Reverse-Current Flow Prevention for a Cell Phone Charger Circuit SBD×4

### Overview

The ISB-A40-0 incorporates four chips of schottky barrier diodes that are necessary for preventing reverse-current flow in charger circuits. This IC is optimal for high-density mounting and miniaturization of electronic products.

### Applications

- Battery charger circuit for portable electronic devices

### Features

- Incorporates two chips of 30V/1A and 30V/200mA, respectively.
- Miniature package makes this IC ideal for miniaturization of electronic devices and high-density mounting.

### Specifications

**Maximum Ratings** at  $T_a = 25^\circ\text{C}$

Internal Device	Parameter	Symbol	Conditions	Ratings	Unit
D1, D2	Repetitive peak reverse voltage	$V_{RRM}$		30	V
	Average output current	$I_O$		1.0	A
D3, D4	Repetitive peak reverse voltage	$V_{RRM}$		30	V
	Average output current	$I_O$		200	mA
Allowable power dissipation		$P_{D-D1, 2}$	*	0.55	W
		$P_{D-D3, 4}$	*	0.4	W
Storage ambient temperature		$T_{stg}$		-40 to +125	$^\circ\text{C}$

\* Value of an element when mounted on a 40mm×40mm×1.0mm FR4 specified board.

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**SANYO Semiconductor Co., Ltd.**

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# ISB-A40-0

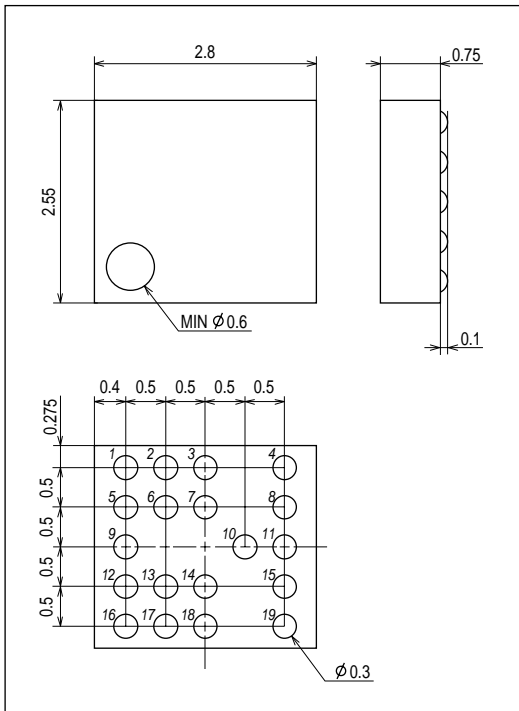
## Electrical Characteristics

Operating Characteristics at  $T_a = 25^\circ\text{C}$

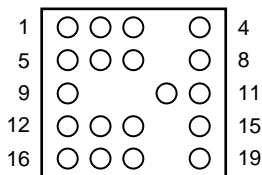
Internal Device	Parameter	Symbol	Conditions	Ratings			unit
				min	typ	max	
D1, D2	Reverse voltage	$V_R$	$I_R=0.5\text{mA}$	30			V
	Forward voltage	$V_{F1}$	$I_F=0.7\text{A}$		0.45	0.51	V
		$V_{F2}$	$I_F=1.0\text{A}$		0.48	0.54	V
	Reverse current	$I_R$	$V_R=16\text{V}$		1.8	15	$\mu\text{A}$
D3, D4	Reverse voltage	$V_R$	$I_R=50\mu\text{A}$	30			V
	Forward voltage	$V_F$	$I_F=200\text{mA}$			0.55	V
	Reverse current	$I_R$	$V_R=15\text{V}$		1	5	$\mu\text{A}$

## Package Dimensions

unit : mm

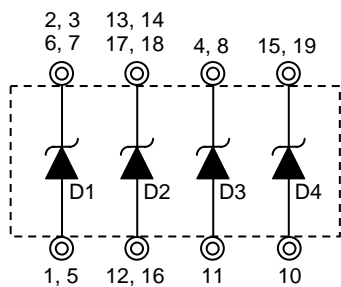


## Pin Assignment Diagram

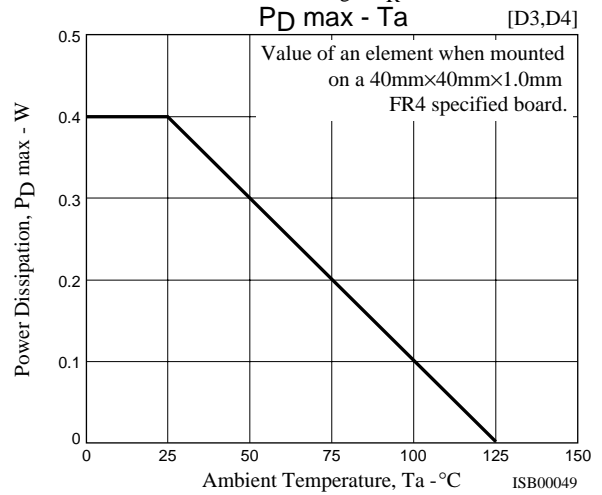
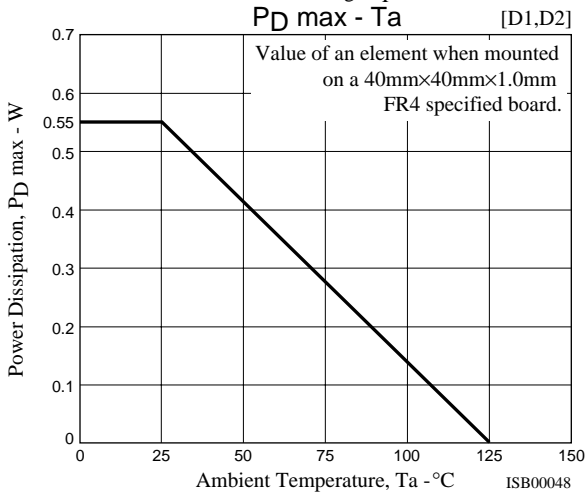
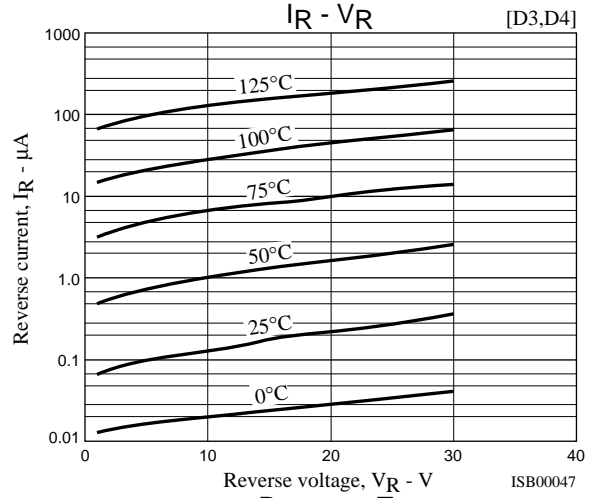
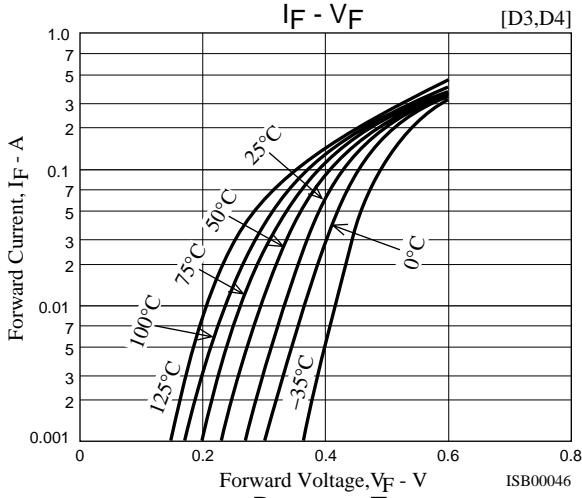
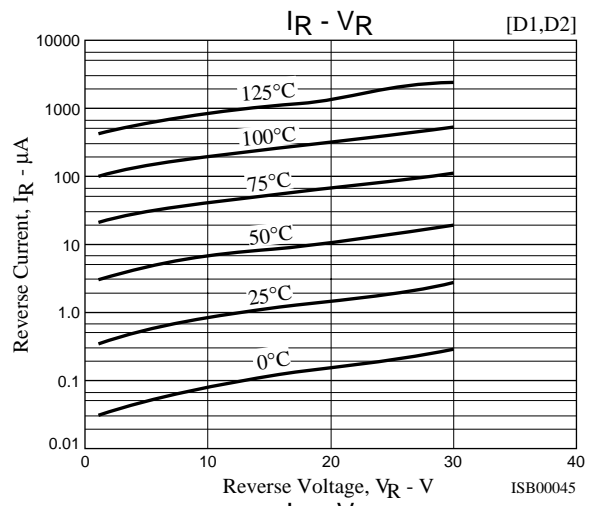
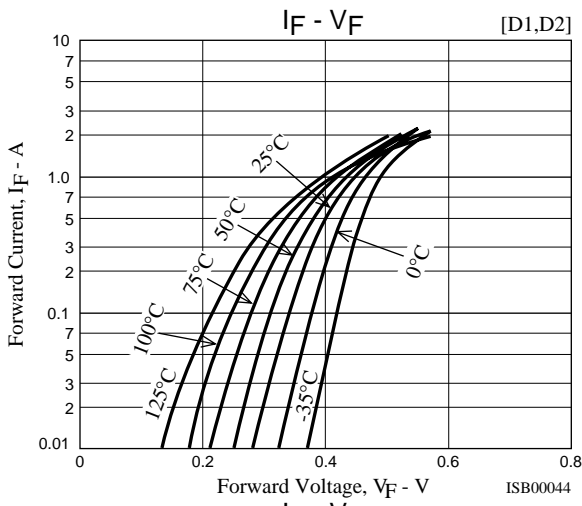


1	D1-Anode	D1-Cathode	D1-Cathode		D3-Cathode	4
5	D1-Anode	D1-Cathode	D1-Cathode		D3-Cathode	8
9	NC			D4-Anode	D3-Anode	11
12	D2-Anode	D2-Cathode	D2-Cathode		D4-Cathode	15
16	D2-Anode	D2-Cathode	D2-Cathode		D4-Cathode	19

## Equivalent Circuit Diagram



# ISB-A40-0



<Manufactured by>

ISB Management Department, Custom Module Division, Electronic Device  
Company, Component & Device Group, SANYO Electric Co., Ltd.

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