



## SI8650BC-B-IS1 Information

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For Reference Only

Part Number SI8650BC-B-IS1
Manufacturer Silicon Labs
Category Isolators

**Digital Isolators** 

**Description** DGTL ISO 3.75KV GEN PURP 16SOIC

**Package** 16-SOIC (0.154", 3.90mm Width)

For the pricing/inventory/lead time, please contact

us

Website: https://www.heisener.com E-mail: salesdept@heisener.com



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# **Certified Quality**

Heisener's commitment to quality has shaped our processes for sourcing, testing, shipping, and every step in between. This foundation underlies each component we sell.









# SI8650BC-B-IS1 Specifications

Manufacturer Part Number\$18650BC-B-IS1ManufacturerSilicon LabsCategoryIsolatorsPackage16-SOIC (0.154", 3.90mm Width)SeriesAutomotive, AEC-Q100TechnologyCapacitive CouplingTypeGeneral PurposeIsolated PowerNoNumber of Channels5Inputs - Side 1/Side 25/0Channel TypeUnidirectionalVoltage - Isolation3750VrmsCommon Mode Transient Immunity (Min)35kV/µsData Rate150MbpsPropagation Delay tpLH / tpHL (Max)13ns, 13nsPulse Width Distortion (Max)4.5nsRise / Fall Time (Typ)2.5ns, 2.5nsVoltage - Supply2.5 V ~ 5.5 VOperating Temperature-40°C ~ 125°CPackage / Case16-SOIC (0.154", 3.90mm Width)		
Category  Isolators  Package  16-SOIC (0.154", 3.90mm Width)  Series  Automotive, AEC-Q100  Technology  Capacitive Coupling  Type  General Purpose  Isolated Power  No  Number of Channels  Inputs - Side 1/Side 2  Channel Type  Unidirectional  Voltage - Isolation  3750Vrms  Common Mode Transient Immunity (Min)  Data Rate  150Mbps  Propagation Delay tpLH / tpHL (Max)  Pulse Width Distortion (Max)  Rise / Fall Time (Typ)  Voltage - Supply  Operating Temperature  Isolators  Digital Isolators  Data County, 3.90mm Width)  Local County, 3.90mm Width)  Local County, 3.90mm Width)  Local County, 3.90mm Width)  Local County, 3.90mm Width)  Volume of County, 3.90mm Width)  Local County,	Manufacturer Part Number	SI8650BC-B-IS1
Package         Digital Isolators           Series         Automotive, AEC-Q100           Technology         Capacitive Coupling           Type         General Purpose           Isolated Power         No           Number of Channels         5           Inputs - Side 1/Side 2         5/0           Channel Type         Unidirectional           Voltage - Isolation         3750Vrms           Common Mode Transient Immunity (Min)         35kV/μs           Data Rate         150Mbps           Propagation Delay tpLH / tpHL (Max)         13ns, 13ns           Pulse Width Distortion (Max)         4.5ns           Rise / Fall Time (Typ)         2.5ns, 2.5ns           Voltage - Supply         2.5 V ~ 5.5 V           Operating Temperature         -40°C ~ 125°C	Manufacturer	Silicon Labs
Package       16-SOIC (0.154", 3.90mm Width)         Series       Automotive, AEC-Q100         Technology       Capacitive Coupling         Type       General Purpose         Isolated Power       No         Number of Channels       5         Inputs - Side 1/Side 2       5/0         Channel Type       Unidirectional         Voltage - Isolation       3750Vrms         Common Mode Transient Immunity (Min)       35kV/μs         Data Rate       150Mbps         Propagation Delay tpLH / tpHL (Max)       13ns, 13ns         Pulse Width Distortion (Max)       4.5ns         Rise / Fall Time (Typ)       2.5ns, 2.5ns         Voltage - Supply       2.5 V ~ 5.5 V         Operating Temperature       -40°C ~ 125°C	Category	Isolators
Series Automotive, AEC-Q100 Technology Capacitive Coupling Type General Purpose Isolated Power No Number of Channels 5 Inputs - Side 1/Side 2 5/0 Channel Type Unidirectional Voltage - Isolation 3750Vrms Common Mode Transient Immunity (Min) 35kV/µs Data Rate 150Mbps Propagation Delay tpLH / tpHL (Max) 13ns, 13ns Pulse Width Distortion (Max) 4.5ns Rise / Fall Time (Typ) 2.5ns, 2.5ns Voltage - Supply 2.5 V ~ 5.5 V Operating Temperature 4.4000 A 1000		Digital Isolators
Technology Type General Purpose Isolated Power No Number of Channels Inputs - Side 1/Side 2 Channel Type Unidirectional Voltage - Isolation Common Mode Transient Immunity (Min) Data Rate 150Mbps Propagation Delay tpLH / tpHL (Max) Pulse Width Distortion (Max) Rise / Fall Time (Typ) Voltage - Supply Operating Temperature  Capacitive Coupling General Purpose  Salvative Coupling Unidirectional  Unidirectional  3750Vrms  3750Vrms  3750Vrms  3750Vrms  3750Vrms  25Nbps  4.5ns  2.5ns, 2.5ns  4.5ns	Package	16-SOIC (0.154", 3.90mm Width)
Type General Purpose Isolated Power No No Number of Channels 5 Inputs - Side 1/Side 2 5/0 Unidirectional Voltage - Isolation 3750Vrms Common Mode Transient Immunity (Min) 35kV/ $\mu$ s Data Rate 150Mbps Propagation Delay tpLH / tpHL (Max) 13ns, 13ns Pulse Width Distortion (Max) 4.5ns Rise / Fall Time (Typ) 2.5ns, 2.5ns Voltage - Supply 2.5 V $\sim$ 5.5 V Operating Temperature $\sim$ 40°C $\sim$ 125°C	Series	Automotive, AEC-Q100
Isolated Power  Number of Channels  Inputs - Side 1/Side 2  Channel Type  Unidirectional  Voltage - Isolation  Common Mode Transient Immunity (Min)  Data Rate  150Mbps  Propagation Delay tpLH / tpHL (Max)  Pulse Width Distortion (Max)  Rise / Fall Time (Typ)  Voltage - Supply  Operating Temperature  No  Unidirectional  3750Vrms  3750Vrms  130kV/µs  130kDys  130kDys  25kV/µs  25kV/µs  25kDNS  25kV/µs  25kDNS  25kV/µs  25kDNS  25kV/µs  25kDNS  25kV/µs  25kDNS	Technology	Capacitive Coupling
Number of Channels  Inputs - Side 1/Side 2  Channel Type  Unidirectional  Voltage - Isolation  Common Mode Transient Immunity (Min)  Data Rate  150Mbps  Propagation Delay tpLH / tpHL (Max)  Pulse Width Distortion (Max)  Rise / Fall Time (Typ)  2.5ns, 2.5ns  Voltage - Supply  Operating Temperature  5/0  Unidirectional  3750Vrms  13750Vrms  13750Vrms  25kV/µs  150Mbps  13ns, 13ns  4.5ns  2.5ns  2.5ns  2.5ns  2.5ns	Туре	General Purpose
Inputs - Side 1/Side 25/0Channel TypeUnidirectionalVoltage - Isolation3750VrmsCommon Mode Transient Immunity (Min)35kV/μsData Rate150MbpsPropagation Delay tpLH / tpHL (Max)13ns, 13nsPulse Width Distortion (Max)4.5nsRise / Fall Time (Typ)2.5ns, 2.5nsVoltage - Supply2.5 V ~ 5.5 VOperating Temperature-40°C ~ 125°C	Isolated Power	No
Channel Type Unidirectional Voltage - Isolation 3750Vrms  Common Mode Transient Immunity (Min) 35kV/ $\mu$ s  Data Rate 150Mbps  Propagation Delay tpLH / tpHL (Max) 13ns, 13ns  Pulse Width Distortion (Max) 4.5ns  Rise / Fall Time (Typ) 2.5ns, 2.5ns  Voltage - Supply 2.5 V ~ 5.5 V  Operating Temperature -40°C ~ 125°C	Number of Channels	5
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Common Mode Transient Immunity (Min) 35kV/ $\mu$ s  Data Rate 150Mbps  Propagation Delay tpLH / tpHL (Max) 13ns, 13ns  Pulse Width Distortion (Max) 4.5ns  Rise / Fall Time (Typ) 2.5ns, 2.5ns  Voltage - Supply 2.5 V ~ 5.5 V  Operating Temperature -40°C ~ 125°C	Channel Type	Unidirectional
Data Rate150MbpsPropagation Delay tpLH / tpHL (Max)13ns, 13nsPulse Width Distortion (Max)4.5nsRise / Fall Time (Typ)2.5ns, 2.5nsVoltage - Supply2.5 V ~ 5.5 VOperating Temperature-40°C ~ 125°C	Voltage - Isolation	3750Vrms
Propagation Delay tpLH / tpHL (Max) 13ns, 13ns  Pulse Width Distortion (Max) 4.5ns  Rise / Fall Time (Typ) 2.5ns, 2.5ns  Voltage - Supply 2.5 $V \sim 5.5 V$ Operating Temperature -40°C ~ 125°C	Common Mode Transient Immunity (Min)	$35kV/\mu s$
Pulse Width Distortion (Max) 4.5ns  Rise / Fall Time (Typ) 2.5ns, 2.5ns  Voltage - Supply 2.5 V $\sim$ 5.5 V  Operating Temperature -40°C $\sim$ 125°C	Data Rate	150Mbps
Rise / Fall Time (Typ) $2.5 \text{ns}, 2.5 \text{ns}$ Voltage - Supply $2.5 \text{ V} \sim 5.5 \text{ V}$ Operating Temperature $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$	Propagation Delay tpLH / tpHL (Max)	13ns, 13ns
Voltage - Supply $2.5 \text{ V} \sim 5.5 \text{ V}$ Operating Temperature $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$	Pulse Width Distortion (Max)	4.5ns
Operating Temperature $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$	Rise / Fall Time (Typ)	2.5ns, 2.5ns
	Voltage - Supply	2.5 V ~ 5.5 V
Package / Case 16-SOIC (0.154", 3.90mm Width)	Operating Temperature	-40°C ~ 125°C
	Package / Case	16-SOIC (0.154", 3.90mm Width)
Supplier Device Package 16-SOIC	Supplier Device Package	16-SOIC
Report errors?		Report errors?

#### SI8650BC-B-IS1 Guarantees



#### **Quality Guarantees**

We provide 90 days warranty. \*

If the items you received were not in perfect quality, we would be responsible for your refund or replacement, but the items must be returned in their original condition.



#### **Service Guarantees**

We guarantee 100% customer satisfaction.

Our experienced sales team and tech support team back our services to satisfy all our customers.

### SI8650BC-B-IS1 Payment Methods



















## SI8650BC-B-IS1 Shipping Methods













If you have any question about SI8650BC-B-IS1, please do not hesitate to contact us!

Website: https://www.heisener.com E-mail: salesdept@heisener.com