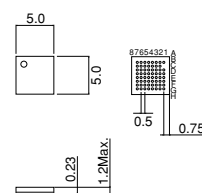# IrDA SIR, FIR Controller IC
BU92002GU

● Description

BU92002GU is FIR(4Mbps) compatible IrDA
controller IC. Built-in 5kbyte FIFO enables
simple system design in correspondence with
interrupt by a frame unit. (DMA is not used.)
It is accessible as memory device of bus
connection and can acquire a large quantity
of data with a 16bit width data bus instantaneously.

● Dimension (Unit : mm)

5.0

5.0

0.5

0.75

0.23

1.2Max.

VBGA063T050

● Features

1) Data transfer speed
   FIR(4Mbps)
   SIR(2.4 to 115.2kbps) compatible
2) Built-in FIFO buffer 5kbyte
3) Data bus 16bit width

● Applications

Mobile phone, printer, DSC, DVD/HDD recorder, LCD-TV,
PDP-TV, projector, portable audio equipments, etc.

● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	V_{DD}	−0.3 ~ +2.5	V
Power dissipation	Pd	570 *	mW
Operating temperature range	Topr	−25 ~ +85	°C
Storage temperature range	Tstg	−40 ~ +100	°C

∗ Measured by SEMI standards board (114.3mm×76.2mm×1.6mm, 4-layer board)
∗ Derating: 5.7mW/°C for operation above Ta=25°C

● Recommended Operating Conditions (Ta=25˚C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	V_{DD}	1.62	1.8	1.98	V
Interface power supply voltage	V_{IO}	1.62	3.0	3.6	V

● Electrical characteristics (Unless otherwise noted; Ta=25˚C, V_{DD}=1.8V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Current consumption 1	I_{DD1}	−	0.1	3.0	μA	No output load, All inputs=0V
Current consumption 2	I_{DD2}	−	5.0	10.0	mA	CLK=48MHz
Digital high level input voltage	V_{IH}	$0.8 \times V_{IO}$	−	−	V	
Digital low level input voltage	V_{IL}	−	−	$0.2 \times V_{IO}$	V	
Digital high level input current	I_{IH}	−	−	10	μA	Input voltage=V_{IO}
Digital low level input current	I_{IL}	−	−	10	μA	Input voltage=GND
Digital high level output voltage	V_{OH}	$V_{IO}-0.6$	−	−	V	$I_{OH}=-1mA$
Digital low level output voltage	V_{OL}	−	−	0.6	V	$I_{OL}=1mA$

●Application Circuit