

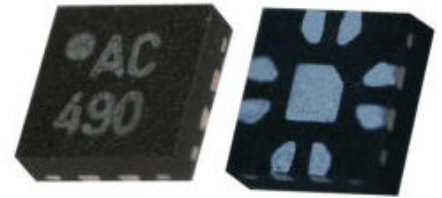
PRELIMINARY DATA SHEET

XM2400SN-AL0901 Ver. 5.00

GaAs SP3T SWITCH MMIC for 2.4GHz Wireless Communication

■ Applications

Typical applications are 2.4GHz WLAN systems and Bluetooth systems.



■ Features

Positive Low Control Voltage+2.6V

Low Insertion LossIL=0.5dB typ.

High IsolationISO=36dB typ.@WLAN Rx - BT

Small / Thin Package8 pin Leadless Package (2mm x 2mm x 0.55mm, RoHS Compliant)

MSL3

■ Absolute Maximum Ratings

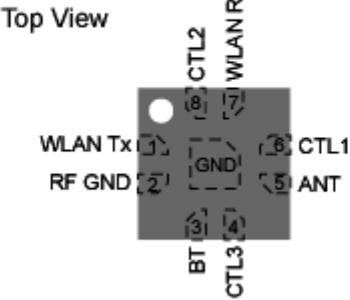
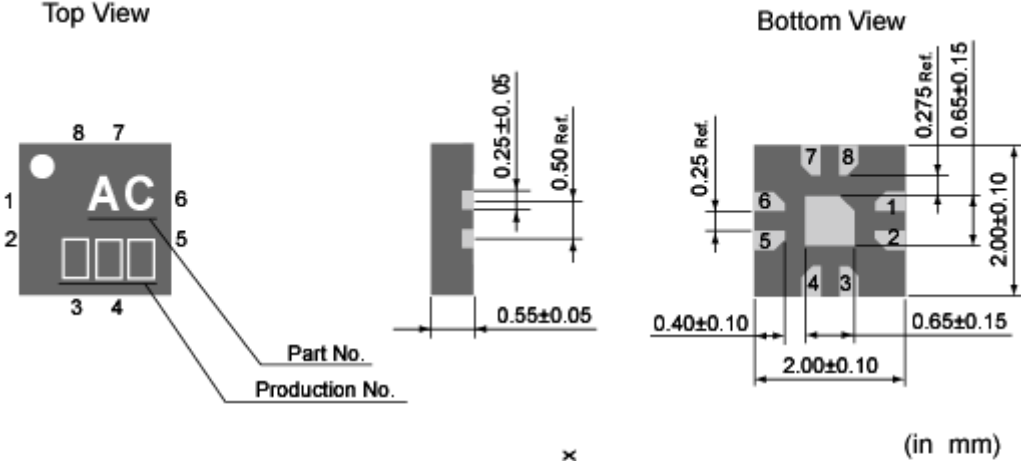
Symbol	Parameter	Conditions	Rating	Unit
VCTL(H)	Control Voltage (High)	Ta = 25°C	5.5	V
VCTL(L)	Control Voltage (Low)	Ta = 25°C	0	V
Pin	RF Input Power (WLAN Tx)	Ta = 25°C 2.6 ≤ VCTL(H)-VCTL(L) ≤ 5.5V	30	dBm
	RF Input Power (BT, WLAN Rx)		25	dBm
Top	Operating Temperature	-	-40 to +85	°C
Tstg	Storage Temperature	-	-55 to +150	°C

■ Electrical Specifications

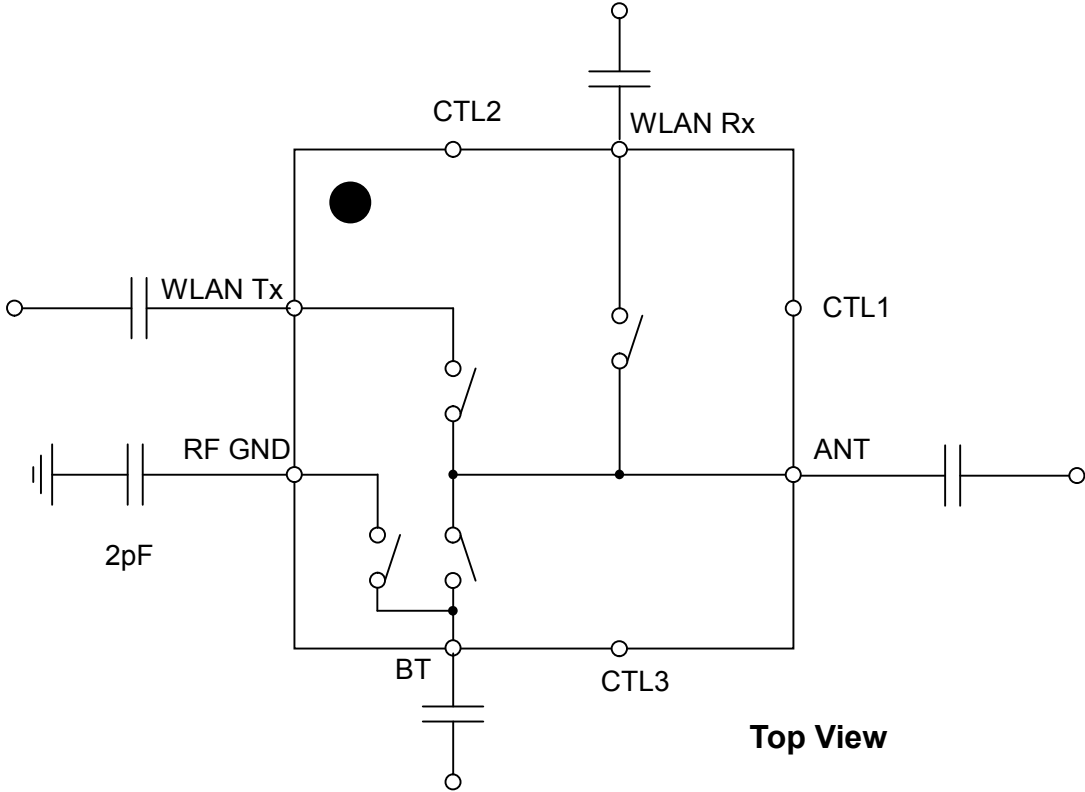
(Ta=25°C, VCTL(H)=2.6V, VCTL(L)=0V)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
VCTL	Control Voltage	-	2.6	-	-	V
ICTL	Control Current	Either State	-	0.1	50	μA
fo	Operation Frequency	-	2.4	-	2.5	GHz
IL	Insertion Loss	ANT - WLAN Rx	-	0.5	0.8	dB
		ANT - WLAN Tx	-	0.5	0.8	dB
		ANT - BT	-	0.5	0.8	dB
ISO	Isolation	ANT - WLAN Rx	21	25	-	dB
		ANT - WLAN Tx	19	23	-	dB
		WLAN Rx – BT(Rx mode)	31	36	-	dB
		WLAN Rx – BT(BT mode)	21	25	-	dB
Pin0.5dB	Input Power for 0.5dB Compression	WLAN Tx - ANT	29	31	-	dBm

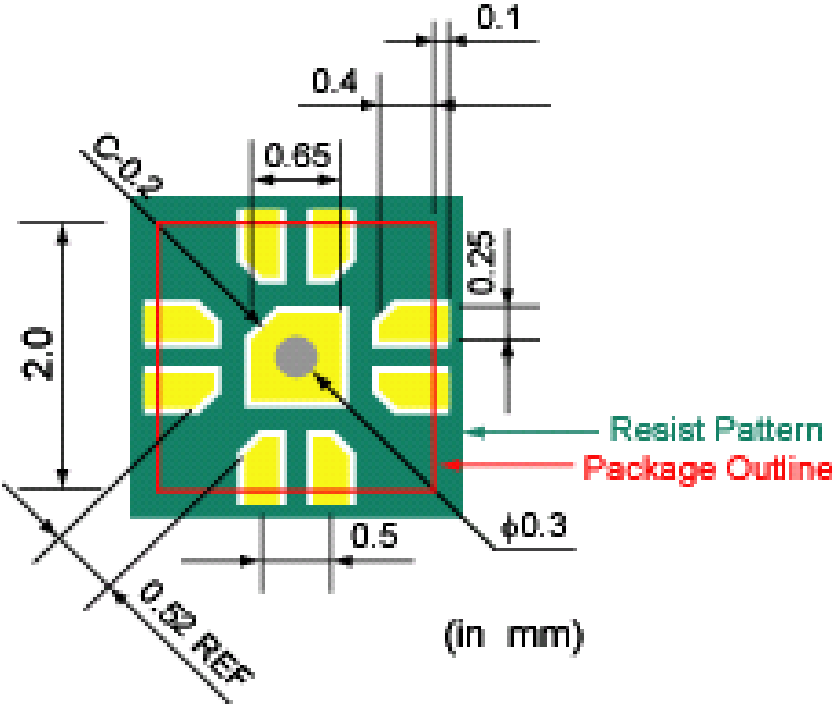
Package Outline and Pin Connections



Block Diagram



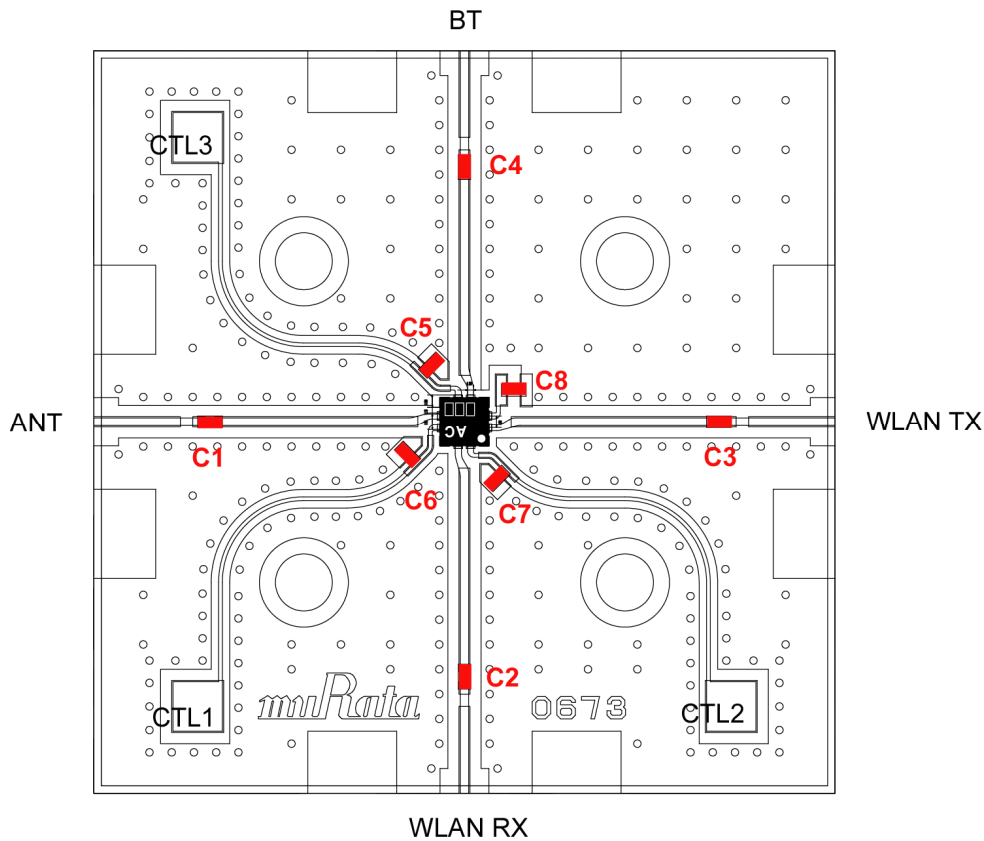
■ Land Pattern



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■ Evaluation Board



Parts List

Part No.	Products	Value
C1 - C4	GRM155 (Murata)	47pF
C5 - C7		100pF
C8		2pF

Substrate

Material : FR4 ($\epsilon_r=4.4$)
Size : 30mm × 30mm
Thickness : 0.2mm

■ Truth Table

Path	CTL1	CTL2	CTL3
ANT - WLAN Rx	H*	L*	L*
ANT - WLAN Tx	L*	H*	L*
ANT - BT	L*	L*	H*

* : H.....2.6V
L.....0V

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■ Typical Performance Data (On Evaluation Board, Fixture's Loss de-embedded)

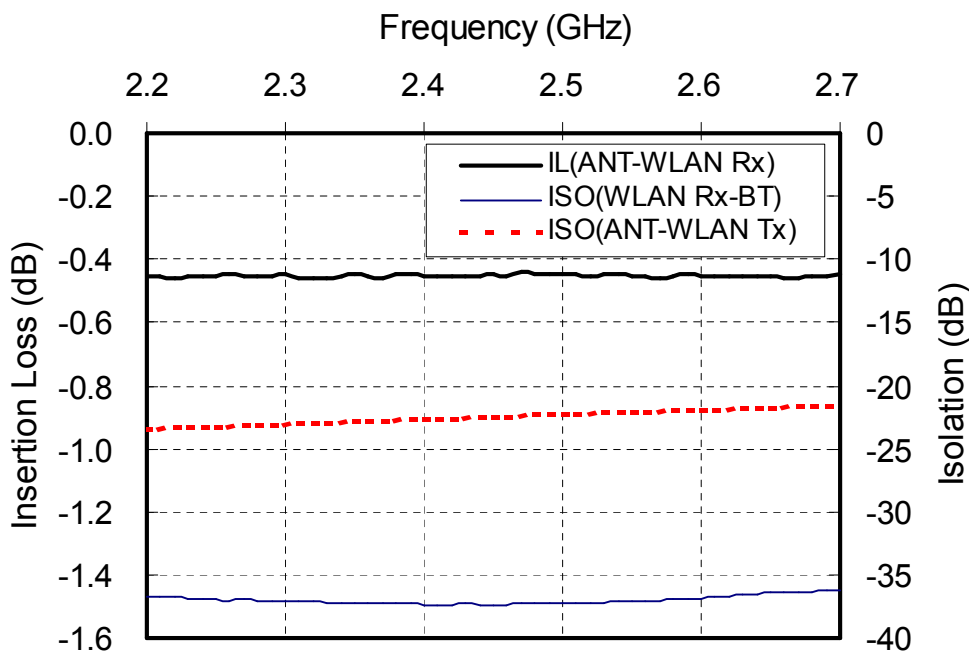


Fig.1 ANT-WLAN Rx ON-mode

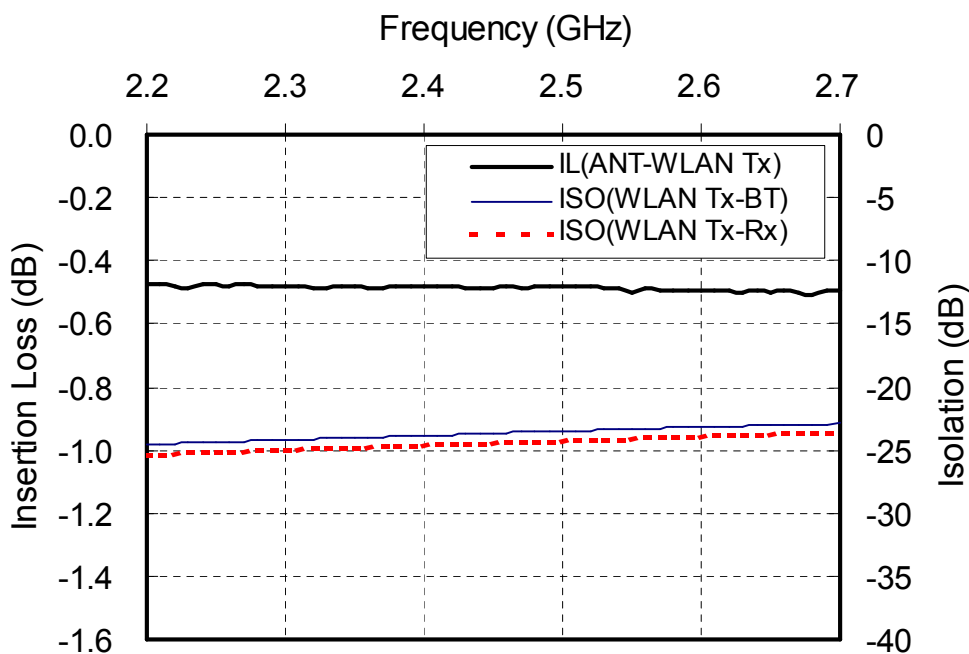


Fig.2 ANT-WLAN Tx ON-mode

■ Typical Performance Data (On Evaluation Board, Fixture's Loss de-embedded)

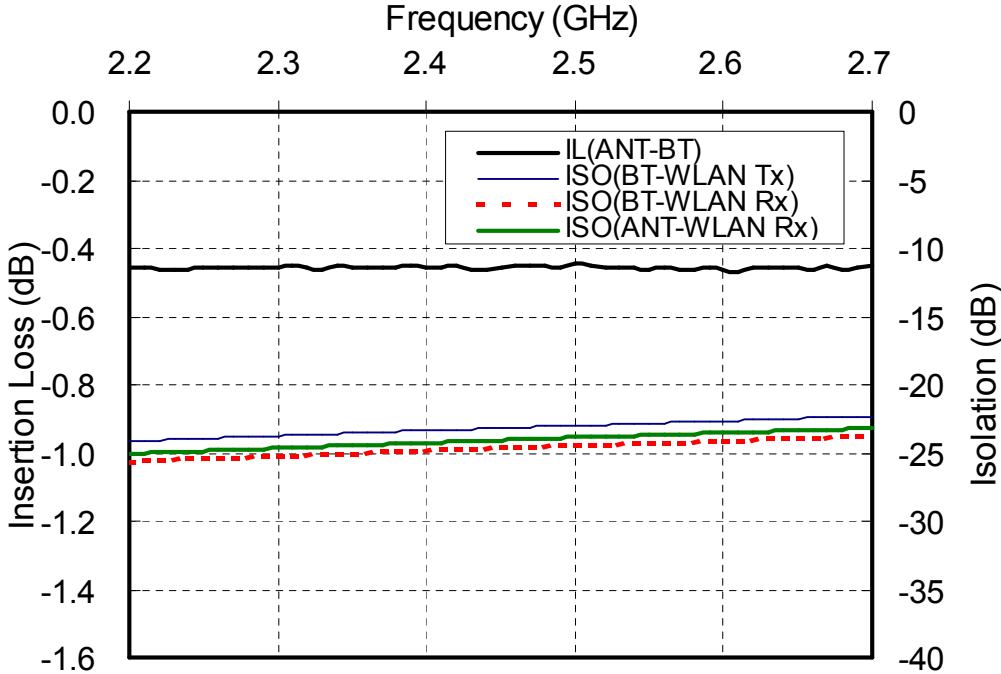
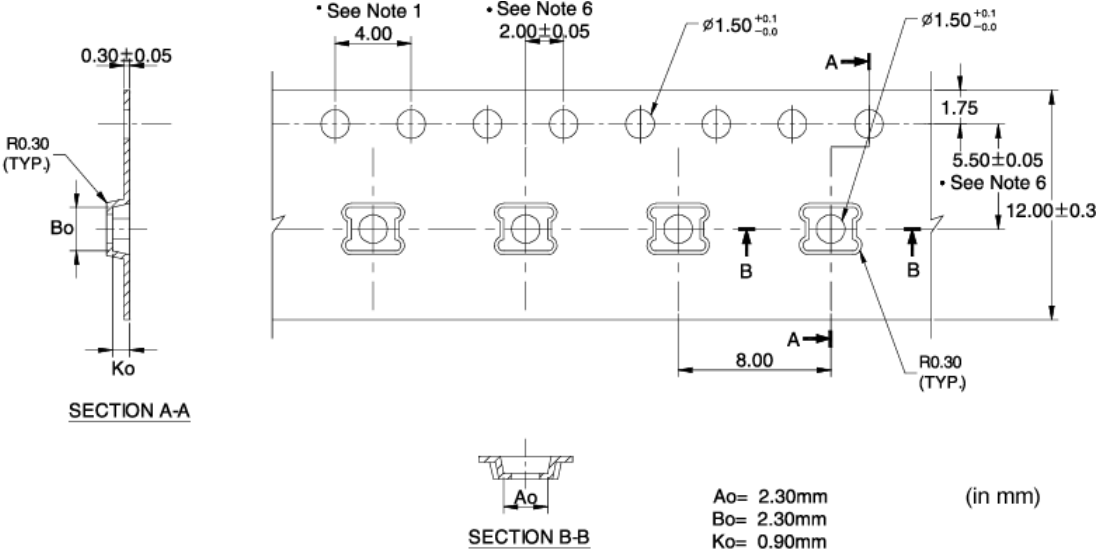


Fig.3 ANT-BT ON-mode

■ Taping Specification

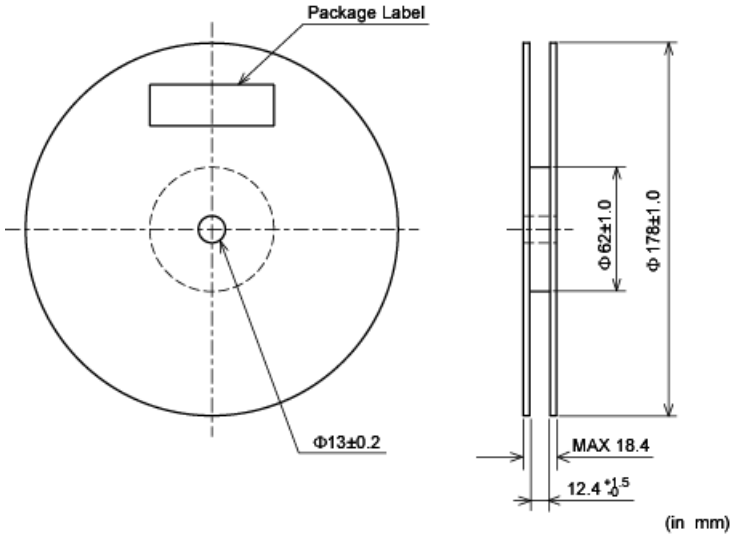
Tape Dimensions



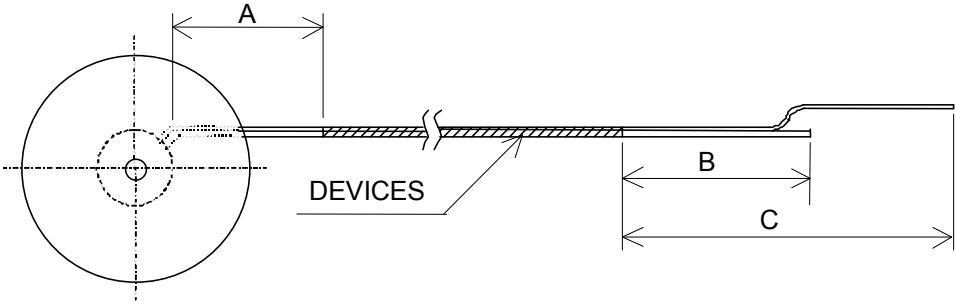
Notes:

1. 10 sprocket hole pitch cumulative tolerance ± 0.2
2. Camber not to exceed 1mm in 100mm.
3. Material: Black Advantek Polystyrene.
4. A_o and B_o measured on a plane 0.3mm above the bottom of the pocket
5. K_o measured from a plane on the inside bottom of the pocket to the top surface of the carrier tape.
6. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.

Reel Dimension

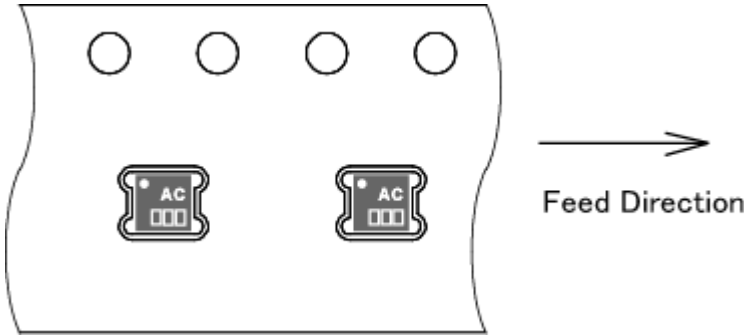


Leader and Trailer Dimensions



Symbol	Items	Ratings (mm)
A	Trailer	160 ~
B	Leader with empty cavities	100 ~
C	Leader	400 ~

Device Dimensions



Packing Unit
2000pcs / reel



CAUTION -Limitation of Applications-

The product is designed and manufactured for consumer application only and is not available for any application listed below which requires especially high reliability for the prevention of such defect as may directly cause damage to the third party's life, body or property.

- Aircraft equipment.
- Aerospace equipment.
- Undersea equipment.
- Medical equipment.
- Transportation equipment (vehicles, trains, ships, etc.).
- Traffic signal equipment.
- Disaster prevention / crime prevention equipment.
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.