

Product Specification

Number: L-KLS1-GN-F-SMD26*7.65*03

Name: 26*7.65*3 mm³
SMD Antenna

Customer: _____

Date: 2025-08-20

Customer Signature:



NINGBO KLS ELECTRONIC CO; LTD

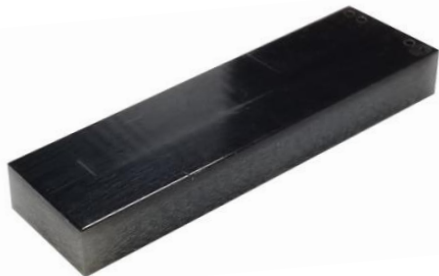
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**ADD : NO. 8-1, RONGXIA RD. XIAPU SHANQIAN
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Compi	Check	Review	Approva
Jenny	Jack.C		

Part name	26*7.65*3 mm ³ SMD Antenna	Date	2025-08-20
Part number	L-KLS1-GN-F-SMD26*7.65*03	Edition	V1
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Features:

Frequency bands: 1176.45 MHz 1575.42MHz 1602.56 MHz

SMD Compliant

Impedance 50 Ohm

Size: 26.0 x 7.65 x 3.0mm

Applications:

GPS L1+L5 & Glonass &Galileo

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1. Electrical Specification

Standards	GPS L1+L5 & GLONASS & Galileo		
Frequency range(MHz)	1176.45MHz	1575.42MHz	1602.56MHz
Peak Gain (dBi)	2.7	2.5	2.8
Average Gain (dB)	-1.8	-1.4	-1.2
VSWR	1.29	1.19	1.18
Return Loss	-17.87	-21.10	-21.73
Efficiency (%)	65.5	72.1	75.5
Polarization mode	Linear	Linear	Linear
Radiation pattern	Omni-Directional	Omni-Directional	Omni-Directional
Output impedance (Ω)	50	50	50
Max. Input Power(W)	5	5	5

Note: All parameters are measured with KLS's EVK which size is 110*50mm

2. Mechanical and Environmental Specification

Mounting Type	SMD
Antenna size(mm)	26.0 (L) x 7.65 (W) x 3.0 (H)
Material	PCB
Operating Temperature (°C)	- 40 °C ~ + 85 °C
Storage Temperature(°C)	- 40 °C ~ + 85 °C

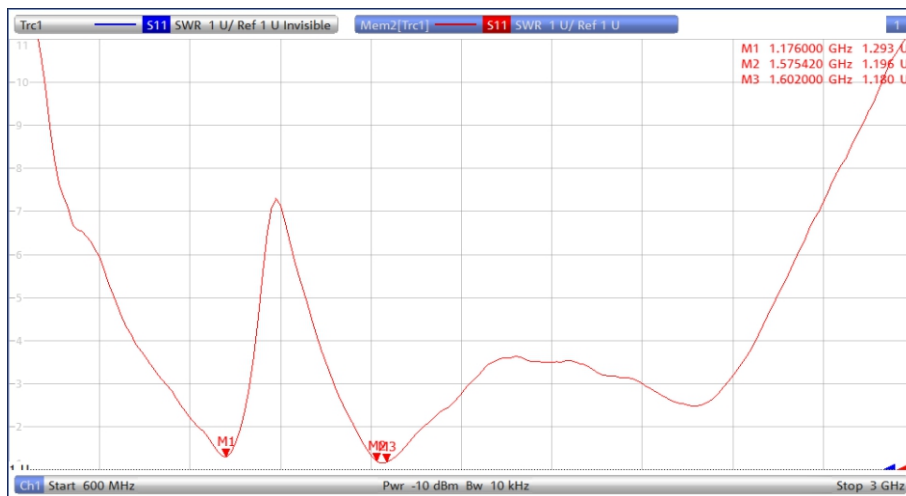
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3. Antenna parameters

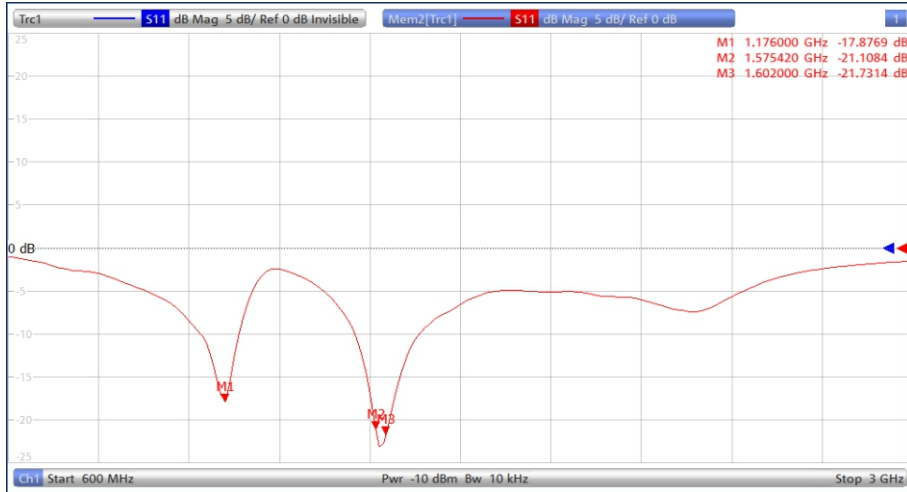
3.1 General Data

FRE (MHz)	1176	1575.42	1602
VSWR	1.29	1.19	1.18
Return Loss	-17.87	-21.10	-21.73
Eff (%)	65.5	72.1	75.5
Average Gain(dB)	-1.8	-1.4	-1.2

3.2 VSWR

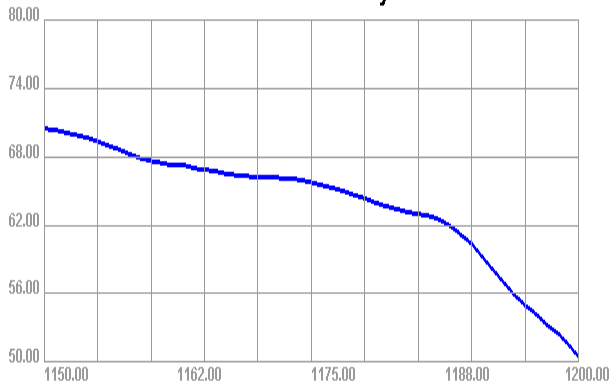


3.3 Return Loss

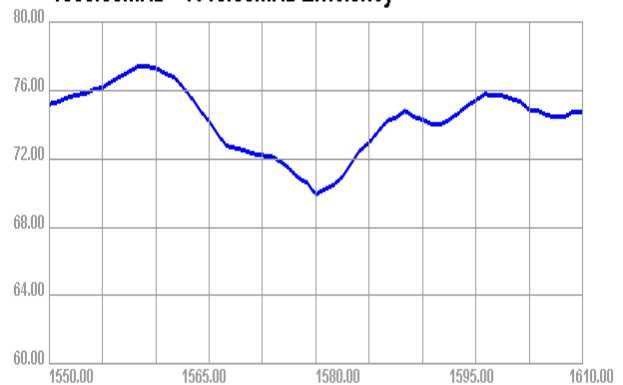


3.4 Efficiency

1150.00MHz - 1200.00MHz Efficiency

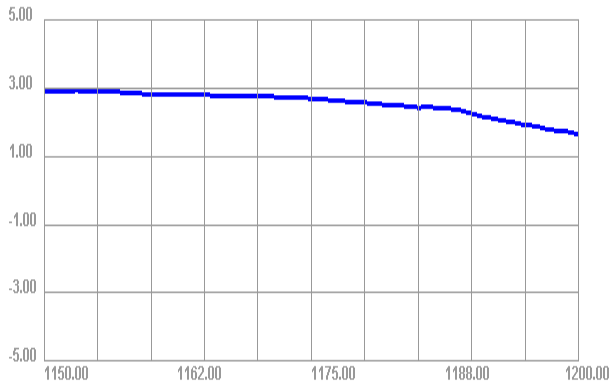


1550.00MHz - 1610.00MHz Efficiency

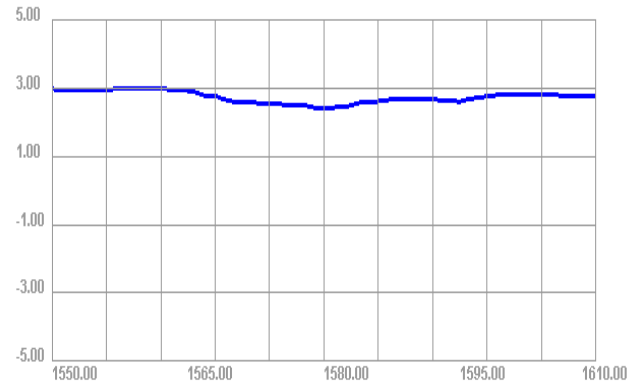


3.5 Gain

1150.00MHz - 1200.00MHz Gain

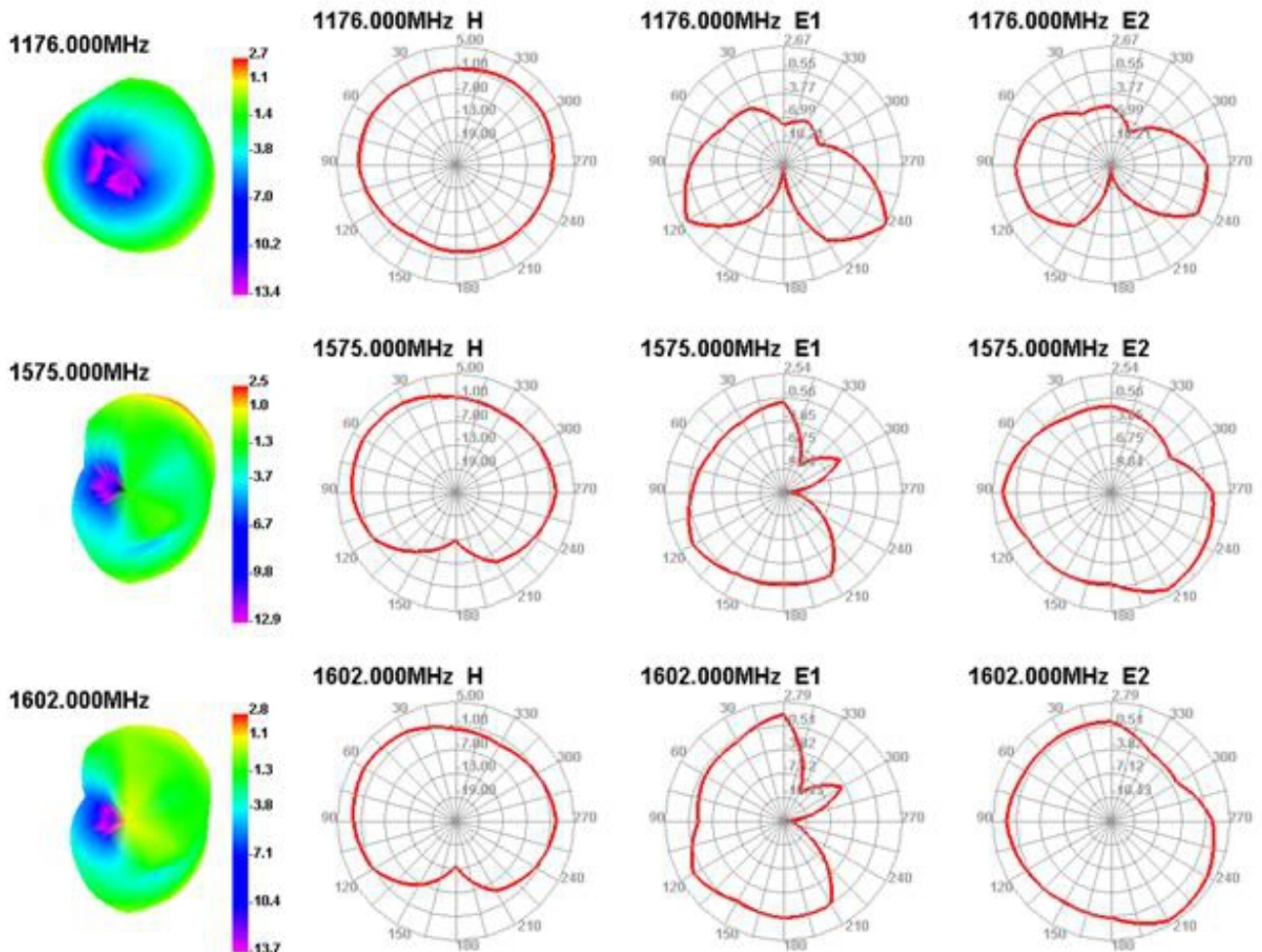
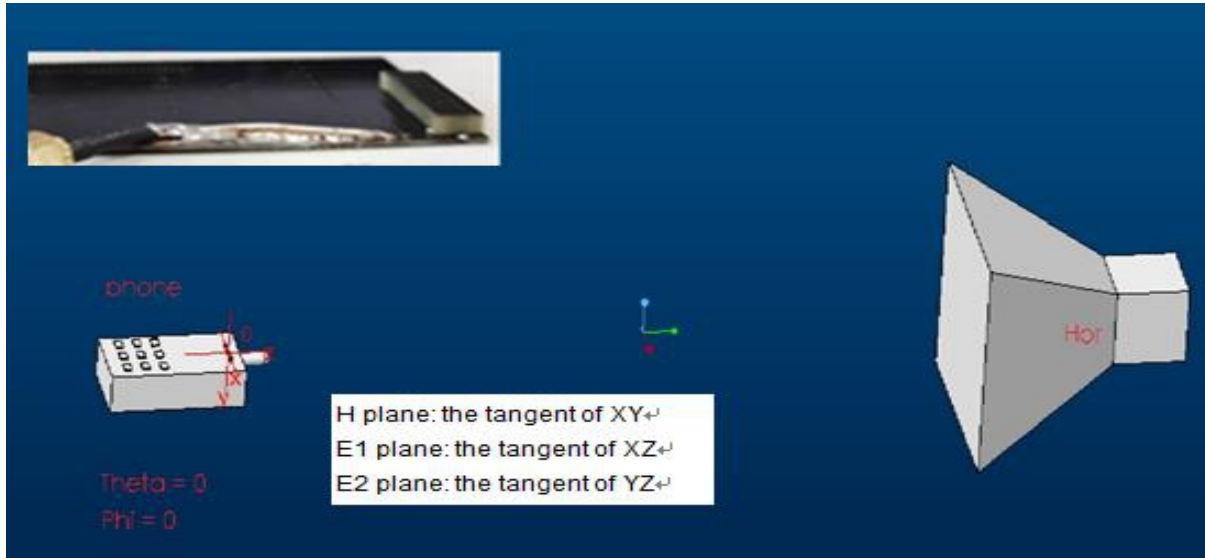


1550.00MHz - 1610.00MHz Gain



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3.6 Directional pattern

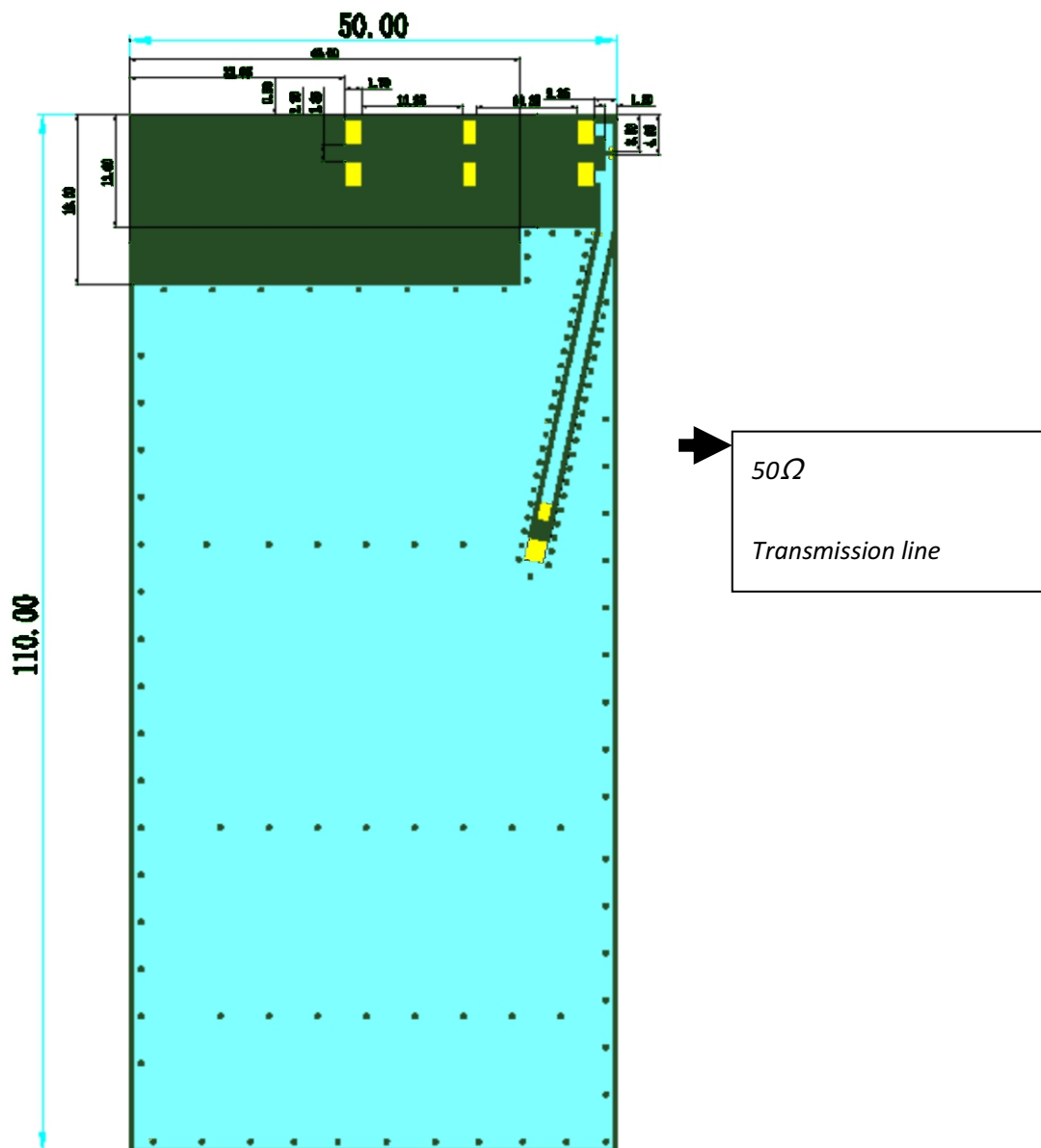


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4. Transmission Line

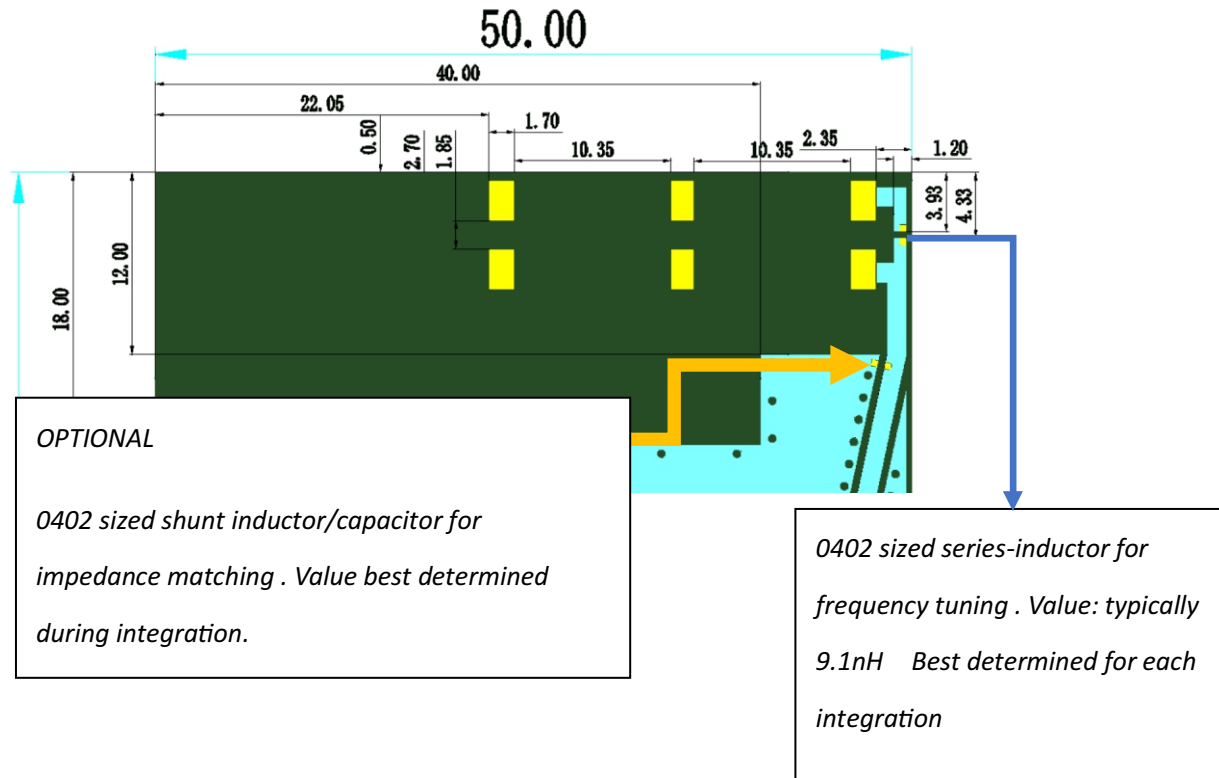
The characteristic impedance of all transmission lines shall be designed as 50 Ω .

- The length of the transmission lines should be kept to as short as possible
- Any other part of the RF system, such as transceiver, power amplifiers, etc., shall also be designed with an impedance of $50\ \Omega$
- All dimensions are in mm

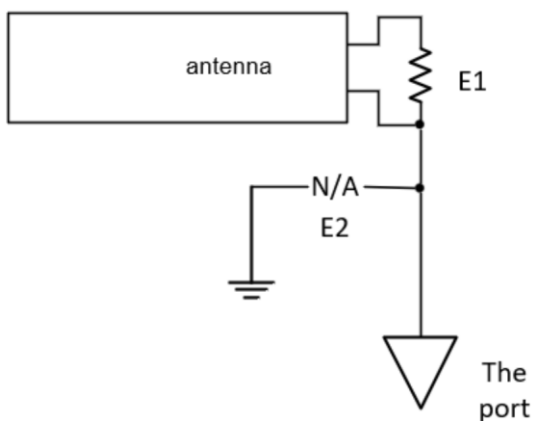


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5. Matching circuit



The antenna requires a matching circuit that must be optimized for each product. The matching circuit will require up to two components and the following circuit should be designed into the host PCB. Not all components may be required but should be included as a precaution. The matching network must be placed close to the antenna feed to ensure it is more effective in tuning the antenna.



position	Type	Value
E1	Inductor	9.1nH
E2	N/A	N/A

7. Soldering Temperature

PHASE	PROFILE FEATURES	PB-Free Assembly(max.)
RAMP-UP	Avg.Ramp-up Rate(Tsmax to Tp)	3°C/second(max.)
PREHEAT	Temperature Min(Tsmin)	150°C
	Temperature Max(Tsmax)	180°C
	Time(tsmin to tsmax)	120seconds max
REFLOW	Temperature(TL)	210°C
	Total Time above TL(tl)	50seconds max
PEAK	Temperature(Tp)	260°C
	Time(tp)	10seconds max
RAMP-DOWN	Rate	5°C/second max

8. Reflow Profile

