



# 50 series 650V • 1a (SiC MOSFET) PRELIMINARY

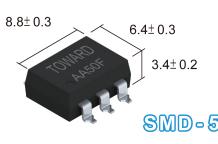
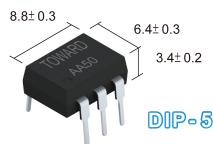


## Features

- Contact Form 1a
- Load Voltage 650V
- Operation LED Current 5.0mA
- Load Current 600mA
- On-Resistance 0.4Ω
- Output Capacitance 5nF
- Low Off-State Leakage Current 10µA

## Application

- Modem
- Telephone Equipment
- Security Equipment
- Sensing Equipment
- Automatic Test Equipment
- I/O Modules
- Electric Vehicle

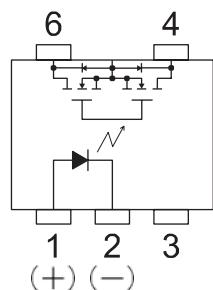


PART NO	PACKAGE	PACKING
AA50	DIP-5	Tube 50pcs
AA50F	SMD-5	Tube 50pcs
AA50F-R1	SMD-5	Reel 1000pcs

\* Package & PCB Layout Design, See Page 134

## Terminal Identification

### AA50(F)



- 1:Anode (LED)
- 2:Cathode (LED)
- 3:NC
- 4,6:Drain (MOS FET)

**Absolute Maximum Ratings 絕對最大定格 (Ambient Temperature 周圍溫度 : 25°C )**

Item		Symbol	Value	
Input 輸入	Continuous LED Current 連續 LED 電流	I <sub>F</sub>	50mA	
	Peak LED Current LED 峰值電流 (f =100 Hz,Duty=1%)	I <sub>FP</sub>	500mA	
	LED Reverse Voltage 逆向 LED 電壓	V <sub>R</sub>	5V	
	Input Power Dissipation 輸入損耗	P <sub>IN</sub>	75mW	
output 輸出	Load Voltage 負荷電壓	V <sub>L</sub>	650V (AC peak or DC)	
	Load Current 負荷電流 (mA)	I <sub>L</sub>	600	
	Peak Load Current 峰值負荷電流 (1ms,1 shot) (mA)	I <sub>PEAK</sub>	1800	
	Output Power Dissipation 輸出損耗 (mW)	P <sub>OUT</sub>	450	
Total Power Dissipation 全損耗 (mW)		P <sub>T</sub>	500	
I/O Breakdown Voltage 入/出力間絕緣電壓 (Vrms)		V <sub>I/O</sub>	3750	
I/O Breakdown Voltage 入/出力間絕緣電壓(Suffix-H) (Vrms)		V <sub>I/O</sub>	5000	
Operating Temperature 使用時溫度		T <sub>OPR</sub>	-40°C ~ +85°C	
Storage Temperature 保存溫度		T <sub>STG</sub>	-40°C ~ +100°C	

**Electrical Specifications 電性規格 (Ambient Temperature 周圍溫度 : 25°C )**

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input 輸入	LED Forward Voltage LED 順向電壓	V <sub>F</sub>	1.0	1.35	1.5	V	I <sub>F</sub> =10mA
	Operation LED Current LED 動作電流	I <sub>F ON</sub>		2.8	5.0	mA	
	Recovery LED Voltage LED 復位電壓	V <sub>F OFF</sub>	0.5	1.2		V	
Output 輸出	On-Resistance 導通電阻 Drain to Drain	R <sub>ON</sub>		0.4	1.2	Ω	I <sub>F</sub> =10mA,I <sub>L</sub> =Rating (within 1sec.)
	Off-State Leakage Current *1 開路狀態漏電流(註1)	I <sub>LEAK</sub>			10	μA	V <sub>L</sub> =650V
	Output Capacitance 輸出端容量	C <sub>OUT</sub>		5		nF	V <sub>L</sub> =0V,f=1MHz
Transmission 傳達	Turn-On Time 動作時間	T <sub>ON</sub>		1.5	3.0	ms	I <sub>F</sub> =10mA,I <sub>L</sub> =Rating
	Turn-Off Time 復位時間	T <sub>OFF</sub>		0.15	1.0	ms	
Coupled 結合	I/O Insulation Resistance 輸入 / 出間絕緣阻抗	R <sub>I/O</sub>	10 <sup>10</sup>			Ω	
	I/O Capacitance 輸入 / 力端靜電容量	C <sub>I/O</sub>		1.3		pF	f=1MHz

Note \*1 : The leakage current value is for 25 degree C. If need more detailed information, please contact your local sales representative.

