



# 51 series 1200V · 1a

## (SiC MOSFET) PRELIMINARY

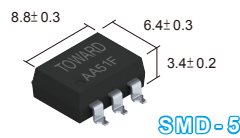
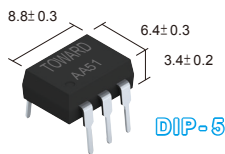


### Features

- Contact Form 1a
- Load Voltage 1200V
- Operation LED Current 5.0mA
- Load Current 470mA
- On-Resistance 0.6Ω
- Output Capacitance 3nF
- Low Off-State Leakage Current 10μA

### Application

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

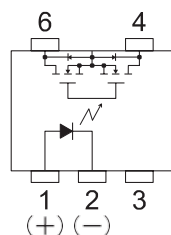


PART NO	PACKAGE	PACKING
AA51	DIP-5	Tube 50pcs
AA51F	SMD-5	Tube 50pcs
AA51F-R1	SMD-5	Reel 1000pcs

\* Package & PCB Layout Design, See Page 134

### Terminal Identification

#### AA51(F)



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

## 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>	1200V (AC peak or DC)
	Load Current 負荷電流 (mA)	I <sub>L</sub>	470
	Peak Load Current 峰值負荷電流(1ms,1shot)	I <sub>PEAK</sub>	1400
	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 輸入/出力間絕緣電壓 (Vrms)		V <sub>I/O</sub>	3750
I/O Breakdown Voltage 輸入/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>		0.6	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> =1200V
	Output Capacitance 輸出端容量	C <sub>OUT</sub>		3		nF	V <sub>L</sub> =0V, f=1MHz
Transmission 傳達	Turn-On Time 動作時間	T <sub>ON</sub>		1.2	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

RF PhotoCoupler MosDriver

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