

58 series 1800V · 1a (SiC MOSFET) *PRELIMINARY*



AEC-Q101 Applying

Specification

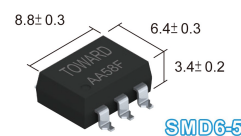
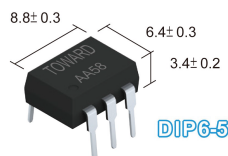
• Contact Form	1a
• Load Voltage	1800 V
• Operation LED Current	5.0 mA
• Load Current	50 mA
• On-Resistance	120 Ω
• Output Capacitance	80 pF
• Low Off-State Leakage Current	10 uA

Application

- Battery Management System (BMS)
- Energy Storage System (ESS)
- Automatic Test Equipment (ATE)
- Telephone Equipment
- Security Equipment
- I/O Modules

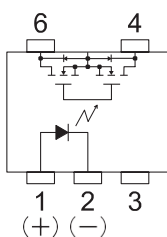
Features

- High Voltage with Low On-Resistance
- Fast Reverse Recovery
- High Avalanche Ruggedness
- Steady Leakage Current at High Temperature



Terminal Identification

AA58(F)



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

PART NO	PACKAGE	PACKING
AA58	DIP6-5	Tube 50pcs
AA58F	SMD6-5	Tube 50pcs
AA58F-R1	SMD6-5	Reel 1000pcs

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 _F	50mA
	Peak LED Current LED 峰值電流 (f =100 Hz,Duty=1%)	I _{FP}	500mA
	LED Reverse Voltage 逆向LED 電壓	V _R	5V
	Input Power Dissipation 輸入損耗	P _{IN}	75mW
output 輸出	Load Voltage 負荷電壓	V _L	1800V (AC peak or DC)
	Load Current 負荷電流 (mA)	I _L	50
	Peak Load Current 峰值負荷電流 (1ms,1shot) (mA)	I _{PEAK}	180
	Output Power Dissipation 輸出損耗 (mW)	P _{OUT}	450
Total Power Dissipation 全損耗 (mW)		P _T	500
I/O Breakdown Voltage 輸入/出力間絕緣電壓 (Vrms)		V _{I/O}	3750
I/O Breakdown Voltage 輸入/出力間絕緣電壓 (Suffix-H) (Vrms)		V _{I/O}	5000
Operating Temperature 使用時溫度		T _{OPR}	-40°C ~ +85°C
Storage Temperature 保存溫度		T _{STG}	-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 _F	1.0	1.33	1.5	V	I _F =10mA
	Operation LED Current LED 動作電流	I _{F ON}		2.0	5.0	mA	
	Recovery LED Voltage LED 復位電壓	V _{F OFF}	0.5	1.2		V	
Output 輸出	On-Resistance 導通電阻 Drain to Drain	R _{ON}		80	150	Ω	I _F =10mA, I _L =Rating
				120	200	Ω	I _F =10mA, I _L =5 mA
	Off-State Leakage Current *1 開路狀態漏電流(註1)	I _{LEAK}			10	μA	V _L =1800V
					1	μA	V _L =1500V
Transmission 傳達	Output Capacitance 輸出端容量	C _{OUT}		80		pF	V _L =0V, f=1MHz
	Turn-On Time 動作時間	T _{ON}		0.5	3.0	ms	I _F =10mA, I _L =Rating
	Turn-Off Time 復位時間	T _{OFF}		0.15	1.0	ms	
Coupled 結合	I/O Insulation Resistance 輸入/ 出間絕緣阻抗	R _{I/O}	10 ¹⁰			Ω	
	I/O Capacitance 輸入/ 力端靜電容量	C _{I/O}		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.