

# 58 series 1800V · 1a

(SiC MOSFET) AEC-Q101 Certified



## Specification

• Contact Form	1a
• Load Voltage	1800 V
• Operation LED Current	5.0 mA
• Load Current	30 mA
• On-Resistance	100 Ω
• Output Capacitance	10 pF
• Low Off-State Leakage Current	1 uA/10 uA
( Tested at 1500 VDC / 1800 VDC )	

## Application

- Battery Management System (BMS)
- Energy Storage System (ESS)
- Automatic Test Equipment (ATE)
- High Voltage Switching

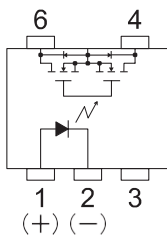
## Features

- High Voltage with Low On-Resistance
- Fast Reverse Recovery
- High Avalanche Ruggedness
- Steady Leakage Current at High Temperature
- Output Creepage Distance 3.8 mm
- Input / Output Clearance Distance 7.3 mm
- Input / Output Creepage Distance 8.9 mm



## Terminal Identification

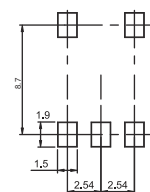
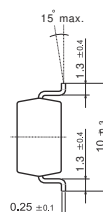
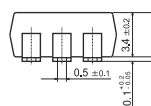
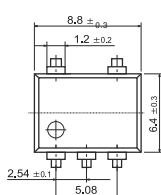
### AA58(F)



- 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

## Dimensions & PC Board pattern



(Top View)

## 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>	1800V (AC peak or DC)
	Load Current 負荷電流 (mA)	I <sub>L</sub>	30
	Peak Load Current 峰值負荷電流(10ms,1shot) (mA)	I <sub>PEAK</sub>	80
	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 ~ +105°C
Storage Temperature 保存溫度		T <sub>STG</sub>	-40°C ~ +125°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	1.33	1.5	V	I <sub>F</sub> =10mA
	Operation LED Current LED 動作電流	I <sub>F ON</sub>		2.0	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 (tested within 1 sec.)	R <sub>ON</sub>		120	200	Ω	I <sub>F</sub> =10mA, I <sub>L</sub> =Rating
				100	180	Ω	I <sub>F</sub> =10mA, I <sub>L</sub> =5 mA
	Off-State Leakage Current 開路狀態漏電流	I <sub>LEAK</sub>			10	μA	V <sub>L</sub> =1800V
					1	μA	V <sub>L</sub> =1500V
Output Capacitance 輸出端容量	C <sub>OUT</sub>		10		pF	V <sub>L</sub> =0V, f=1MHz	
Transmission 傳達	Turn-On Time 動作時間	T <sub>ON</sub>		0.2	3.0	ms	I <sub>F</sub> =10mA, I <sub>L</sub> =Rating
	Turn-Off Time 復位時間	T <sub>OFF</sub>		0.06	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

# AA58 Reference Data

