

AS58F series 1800V · 1a

(SiC MOSFET)



Specification

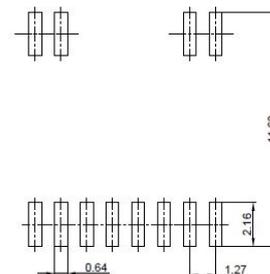
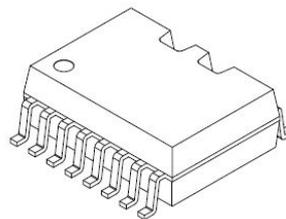
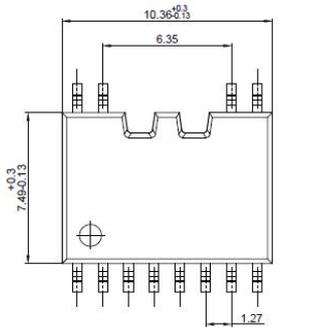
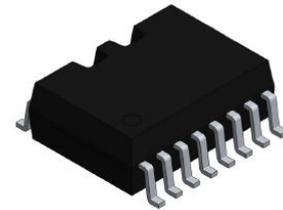
- Contact Form 1a
- Load Voltage 1800 V
- Operation LED Current 5.0 mA
- Load Current 30 mA
- On-Resistance 100 Ω
- Output Capacitance 10 pF
- Low Off-State Leakage Current 1 uA/10 uA
(Tested at 1500 VDC / 1800 VDC)

Application

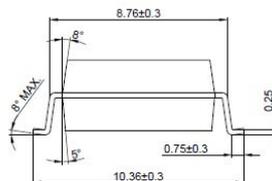
- Battery Management System (BMS)
- Energy Storage System (ESS)
- Automatic Test Equipment (ATE)
- Telephone Equipment
- Security Equipment
- I/O Modules

Features

- High Voltage with Low On-Resistance
- Fast Reverse Recovery
- High Avalanche Ruggedness
- Steady Leakage Current at High Temperature
- Creepage and clearance ≥ 8 mm (input-output)
- Creepage ≥ 8 mm (between drain pins of MOSFETs)

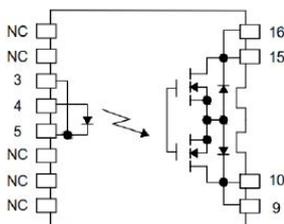


(Top View)



Terminal Identification

AS58(F)



- 4:Anode (LED)
- 3,5:Cathode (LED)
- 9,10,15,16:Drain (MOSFET)

PART NO	PACKAGE	PACKING
AS58F	SMD16	43pcs
AS58F-R1	SMD16	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	30
	Peak Load Current 峰值負荷電流(10ms,1shot) (mA)	I _{PEAK}	80
	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}	5000
Operating Temperature 使用時溫度		T _{OPR}	-40°C ~ +105°C
Storage Temperature 保存溫度		T _{STG}	-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 _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 (tested within 1 sec.)	R _{ON}		120	200	Ω	I _F =10mA, I _L =Rating
			100	180	Ω	I _F =10mA, I _L =5 mA	
	Off-State Leakage Current 開路狀態漏電流	I _{LEAK}			10	μA	V _L =1800V
					1	μA	V _L =1500V
Output Capacitance 輸出端容量	C _{OUT}		10		pF	V _L =0V, f=1MHz	
Transmission 傳達	Turn-On Time 動作時間	T _{ON}		0.2	3.0	ms	I _F =10mA, I _L =Rating
	Turn-Off Time 復位時間	T _{OFF}		0.06	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

AS58F Reference Data

