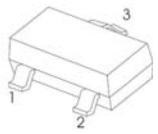
AS3415E P-Channel MOSFET(ESD)

SOT-23



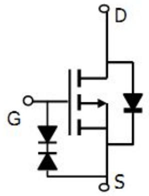
1. GATE
2. SOURCE
3. DRAIN

FEATURE

TrenchFET Power MOSFET

APPLICATIONS

- Load Switch for Portable Devices
- DC/DC Converter



MARKING: A15E

■ Maximum ratings (T_a=25℃ unless otherwise noted)

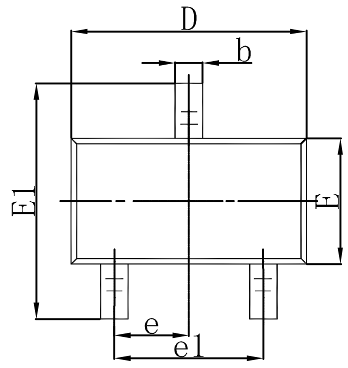
Characteristic 特性參數	Symbol 符號	Max 最大値	Unit 單位
Drain-Source Voltage 漏極-源極電壓	BV_{DSS}	-20	V
Gate- Source Voltage 柵極-源極電壓	V_{GS}	±8	V
Drain Current (continuous) 漏極電流-連續	I_D	-4	A
Drain Current (pulsed) 漏極電流-脉冲	I_{DM}	-17	A
ESD(HBM) 靜電釋放（人體模型）		2500	V
Total Device Dissipation 總耗散功率 T_A=25℃環境溫度爲 25℃	P_D	1000	mW
Junction 結溫	T_J	150	℃
Storage Temperature 儲存溫度	T_{stg}	-55to+150	℃

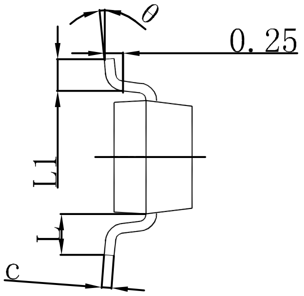
■ Maximum ratings (T_a=25℃ unless otherwise noted)

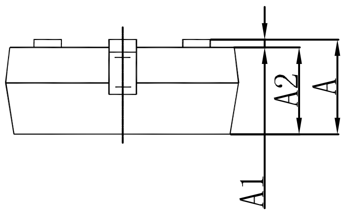
Characteristic 特性參數	Symbol 符號	Min 最小値	Typ 典型値	Max 最大値	Unit 單位
Drain-Source Breakdown Voltage 漏極-源極擊穿電壓(I_D = -250uA,V_{GS}=0V)	BV_{DSS}	-20	—	—	V
Gate Threshold Voltage 柵極開启電壓(I_D = -250uA,V_{GS}= V_{DS})	$V_{GS(th)}$	-0.3	—	-1	V
Diode Forward Voltage Drop 内附二極管正向壓降(I_S= -0.75A,V_{GS}=0V)	V_{SD}	—	—	-1.5	V
Zero Gate Voltage Drain Current 零柵壓漏極電流(V_{GS}=0V, V_{DS}= -16V) (V_{GS}=0V, V_{DS}= -16V, T_A=55℃)	I_{DSS}	—	—	-1 -10	uA
Gate Body Leakage 柵極漏電流(V_{GS}=±8V, V_{DS}=0V)	I_{GSS}	—	—	±10	uA
Static Drain-Source On-State Resistance 静态漏源導通電阻(I_D= -4A,V_{GS}= -4.5V)	$R_{DS(ON)}$	—	35	43	mΩ
Static Drain-Source On-State Resistance 静态漏源導通電阻(I_D= -3A,V_{GS}= -2.5V)	$R_{DS(ON)}$	—	45	54	mΩ
Static Drain-Source On-State Resistance 静态漏源導通電阻(I_D= -2A,V_{GS}= -1.8V)	$R_{DS(ON)}$	—	56	73	mΩ
Input Capacitance 輸入電容 (V_{GS}=0V, V_{DS}= -10V,f=1MHz)	C_{ISS}	—	1450	—	pF
Output Capacitance 輸出電容 (V_{GS}=0V, V_{DS}= -10V,f=1MHz)	C_{OSS}	—	205	—	pF
Turn-ON Time 开启時間 (V_{DS}= -10V, I_D= -2.8A, R_{GEN}=6Ω)	$t_{(on)}$	—	9.5	—	ns
Turn-OFF Time 关断時間 (V_{DS}= -10V, I_D= -2.8A, R_{GEN}=6Ω)	$t_{(off)}$	—	94	—	ns

Pulse Width≤300 μs; Duty Cycle≤2.0%

SOT-23 Package Outline Dimensions

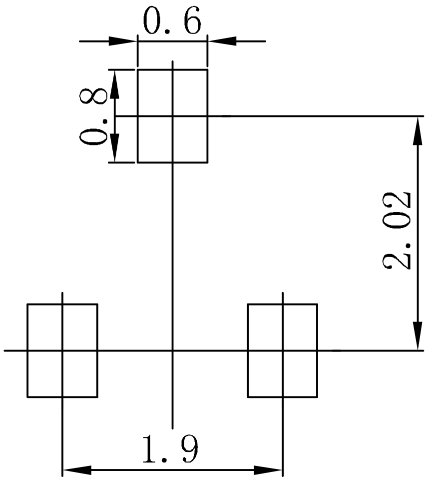






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	6°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.