AS3434E N-Channel MOSFET(ESD)

SOT-23 Plastic-Encapsulate MOSFETS

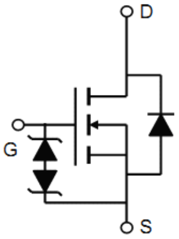
FEATURE

TrenchFET Power MOSFET

APPLICATIONS

- Load Switch for Portable Devices
- DC/DC Converter

MARKING: R34



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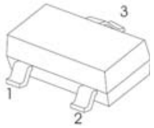


1. GATE
2. SOURCE
3. DRAIN

Maximum ratings (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±10	V
Continuous Drain Current	I_D	5	A
Pulsed Drain Current	I_{DM}*	20	A
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~+150	℃
Lead Temperature for Soldering Purposes(1/8'' from case for 10 s)	T_L	260	℃

*Repetitive rating：Pluse width limited by junction temperature.

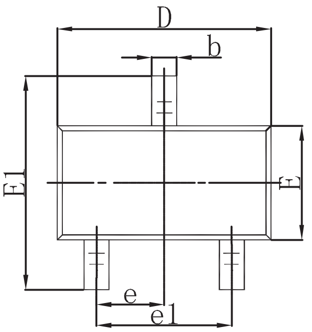
Electrical characteristics (T_a=25℃ unless otherwise noted)

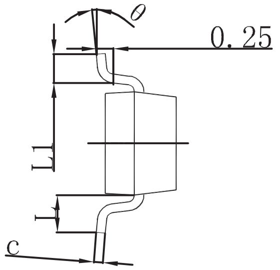
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =30V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±10	μA
Gate threshold voltage(note 1)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.6		1	V
Drain-source on-resistance (note 1)	$R_{DS(on)}$	V_{GS} =10V, I_D =5A			42	mΩ
		V_{GS} =4.5V, I_D =5A			44	mΩ
		V_{GS} =2.5V, I_D =4A			50	mΩ
Forward tranconductance (note 1)	g_{FS}	V_{DS} =5V, I_D =4A		15		S
Diode forward voltage (note 1)	V_{SD}	I_S=1A, V_{GS} = 0V			1	V
DYNAMIC PARAMETERS (note2)						
Input Capacitance	C_{iss}	V_{DS} =15V,V_{GS} =0V,f =1MHz		245		pF
Output Capacitance	C_{oss}			35		pF
Reverse Transfer Capacitance	C_{rss}			20		pF
SWITCHING PARAMETERS (note 2)						
Turn-on delay time	$t_{d(on)}$	V_{DD}=15V,V_{GS}=10V R_L=3.75Ω,R_{GEN}=3Ω		2		ns
Turn-on rise time	t_r			3.5		ns
Turn-off delay time	$t_{d(off)}$			22		ns
Turn-off fall time	t_f			3.5		ns
Total Gate Charge	Q_g	V_{DS} =15V,V_{GS} =10V,I_D=4A			10	nC
Gate-Source Charge	Q_{gs}			0.5		nC
Gate-Drain Charge	Q_{gd}			1		nC

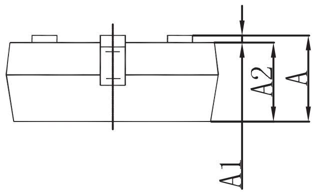
Notes : 1. Pulse Test : Pulse width≤300μs, duty cycle≤0.5%.

2. Guaranteed by design, not subject to production testing.

SOT-23 Package Outline Dimensions

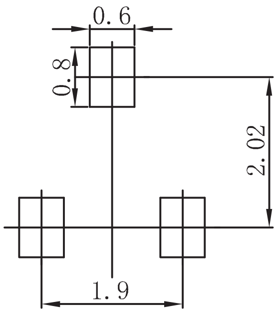






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 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°	8°

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.