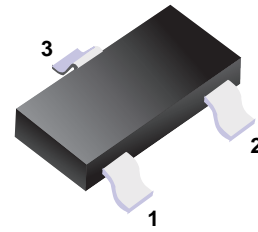


■ N-Channel Enhancement MOSFET

■ FEATURES

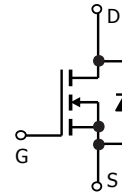
TrenchFET Power MOSFET



- 1. Gate
- 2. Source
- 3. Drain

■ Marking Code:A2SHB

■ Simplified outline(SOT-23)



■ MAXIMUM RATINGS (TA=25°C unless otherwise noted)

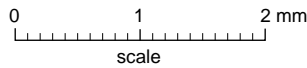
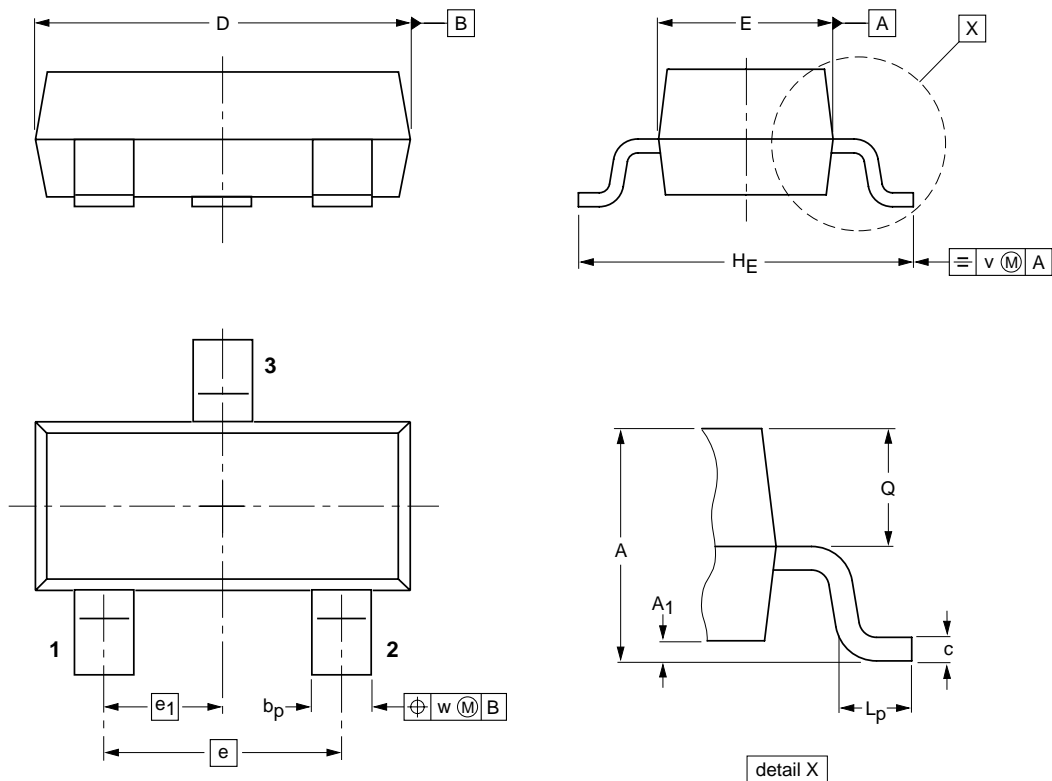
Symbol	Parameter	Value	Units
V _{DS}	Drain-Source voltage	20	V
V _{GS}	Gate-Source voltage	±10	V
I _D	Drain current	3	A
P _D	Power Dissipation	1	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

■ ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250uA	20			V
Gate-Threshold Voltage	V _{th(GS)}	V _{DS} = V _{GS} , I _D =250 uA	0.5	0.75	1.2	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±10V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	uA
Drain-Source On-Resistance	r _{DS(ON)}	V _{GS} =2.5V, I _D =2.5A		37	59	mΩ
		V _{GS} =4.5V, I _D =2.9A		30	45	mΩ
Forward Trans conductance	g _{fs}	V _{DS} =5V, I _D =2.9A		9.5		s
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHz		300		pF
Output Capacitance	C _{oss}			120		
Reverse Transfer Capacitance	C _{rss}			80		
Switching Capacitance						
Turn-on Delay Time	t _{d(on)}	V _{DD} =10V, I _D =2.9A, V _{GS} =4.5V, R _{GEN} =6Ω		10	15	nS
Turn-on Rise Time	t _r			50	85	nS
Turn-off Delay Time	t _{d(off)}			17	45	nS
Turn-off Fall Time	t _f			10	20	nS
Total Gate Charge	Q _g	V _{DS} =10V, I _D =2.9A, V _{GS} =4.5V,		4.0	10	nC
Gate-Source Charge	Q _{gs}			0.65		nC
Gate-Drain Charge	Q _{gd}			1.2		nC
Drain-Source Diode Characteristics						
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =2.9A		0.75	1.2	V
Diode Forward Current	I _S				2.9	A

Package Outline

SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1