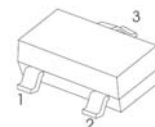


**FEATURE**

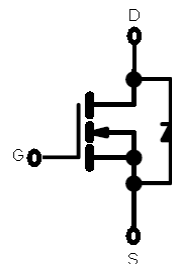
TrenchFET Power MOSFET

APPLICATIONS

- Load Switch for Portable Devices
- DC/DC Converter
-

SOT-23

1. GATE
2. SOURCE
3. DRAIN

MARKING: S6 / A6ŝHB**Maximum ratings (at T_A=25°C unless otherwise noted)**

Parameter	Symbol	Value	Unit
Drain-Source voltage	V _{DS}	30	V
Gate-Source Voltage	V _{GS}	±20	
Continuous Drain Current (T _J =150°C) ^{a,b}	I _D	3.16	A
Pulsed Drain Current	I _{DM}	20	
Continuous Source Current(Diode Conduction) ^{a,b}	I _S	0.62	
Maximum Power Dissipation ^{a,b}	P _D	0.75	W
Thermal Resistance from Junction to Ambient (t≤5s)	R _{θJA}	100	°C/W
Operating Junction and Storage Temperature Range	T _J , T _{stg}	-55 to 150	°C

Notes :

a. Surface Mounted on 1" × 1" FR4 board, t≤5s.

b. Pulse width limited by maximum junction temperature.

Electrical characteristics (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DS}$	$V_{GS} = 0V, I_D = 250\mu A$	30			V
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.0		3.0	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0V$			0.5	μA
Drain-Source On-Resistance ^a	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 3.5A$		0.038	0.058	Ω
		$V_{GS} = 4.5V, I_D = 2.8A$		0.052	0.082	
Forward Transconductance ^a	g_{fs}	$V_{DS} = 4.5V, I_D = 2.5A$		7.0		S
Diode Forward Voltage	V_{SD}	$I_S = 1.25A, V_{GS} = 0V$		0.8	1.2	V
Dynamic						
Gate Charge	Q_g	$V_{DS} = 15V, V_{GS} = 5V, I_D = 2.5A$		3.0	4.5	nC
Total Gate Charge	Q_{gt}	$V_{DS} = 15V, V_{GS} = 10V, I_D = 2.5A$		6	9	
Gate-Source Charge	Q_{gs}			1.6		
Gate-Drain Charge	Q_{gd}			0.6		
Gate Resistance	R_g	$f = 1.0MHz$	2.5	5	7.5	Ω
Input Capacitance	C_{iss}	$V_{DS} = 15V, V_{GS} = 0V, f = 1MHz$		305		pF
Output Capacitance	C_{oss}			65		
Reverse Transfer Capacitance	C_{rss}			29		
Switching						
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = 15V,$ $R_L = 15\Omega, I_D \approx 1A,$ $V_{GEN} = 10V, R_g = 6\Omega$		16		ns
Rise Time	t_r			5		
Turn-Off Delay Time	$t_{d(off)}$			23		
Fall Time	t_f			3		

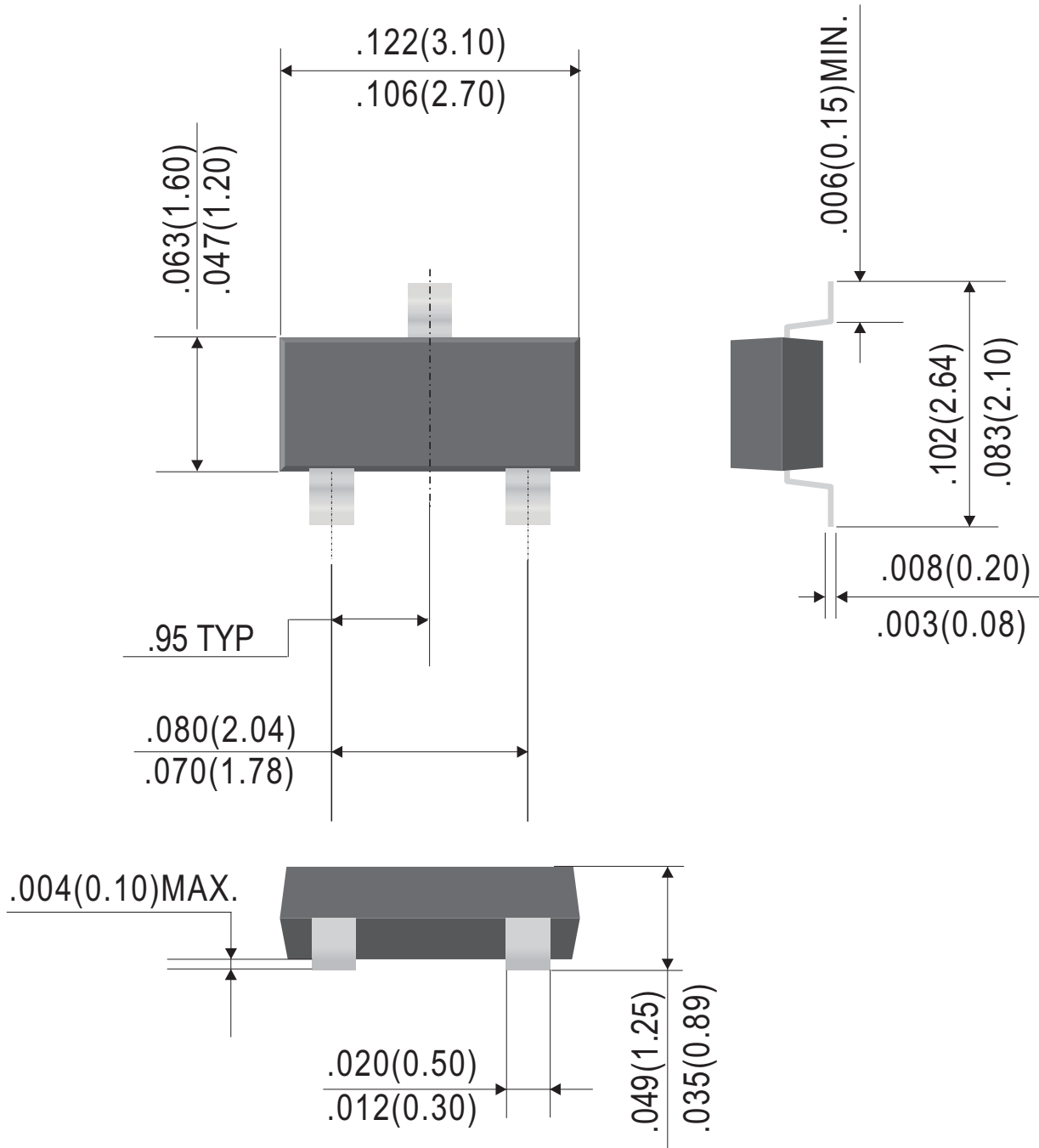
Notes :

a. Pulse Test : Pulse Width ≤ 300μs, duty cycle ≤ 2%.



Outline Drawing

SOT-23



Dimensions in inches and (millimeters)

Rev.E



Ordering Information:

Device PN	Packing
SE2306-T ⁽¹⁾ G ⁽²⁾ -WS ⁽³⁾	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

(3) WS : Willas brand abbreviation, Label Type does not display

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