

PRIMARY CHARACTERISTICS

V_{(BR)DSS}	R_{DS(on)}MAX	I_D
-30 V	88mΩ@-10V	-2.7A
	138mΩ@-4.5V	

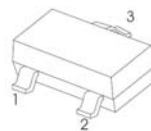
FEATURES

- TrenchFET Power MOSFET
- Moisture Sensitivity Level 1

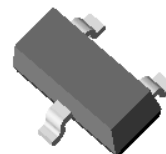
FEATURES

- Load Switch for Portable Devices

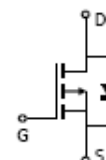
SOT-23 PACKAGE



1. GATE
2. SOURCE
3. DRAIN



MARKING



MECHANICAL DATA

- Case : Molded plastic,SOT-23
- Polarity : As Above Marked
- Terminals :Plated terminals,
solderable per MIL-STD-750,Method
2026
- Epoxy : UL94-V0 rated flame
retardant

Maximum ratings (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 ^{a,b}	I_D	-2.7	A
Continuous Source-Drain Current ^{a,b}	I_S	-0.91	
Power Dissipation ^{a,b}	P_D	1.1	W
Thermal Resistance from Junction to Ambient ($t \leq 5s$)	$R_{\theta JA}$	114	$^{\circ}C/W$
Operating Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{stg}	-55 ~+150	

MOSFET ELECTRICAL CHARACTERISTICS

$T_a=25^{\circ}\text{C}$ unless otherwise specified

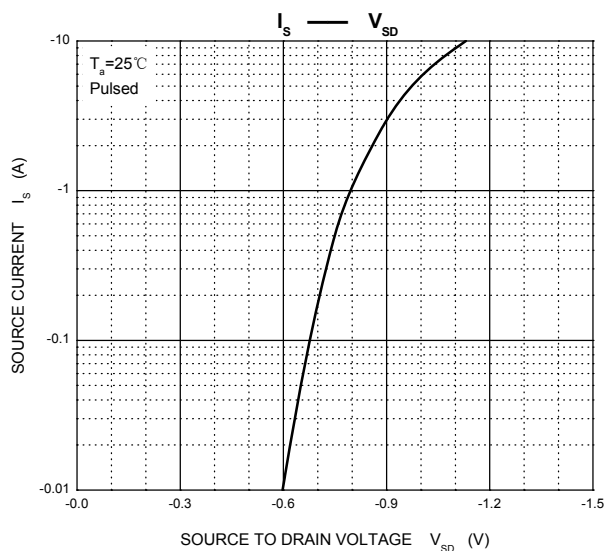
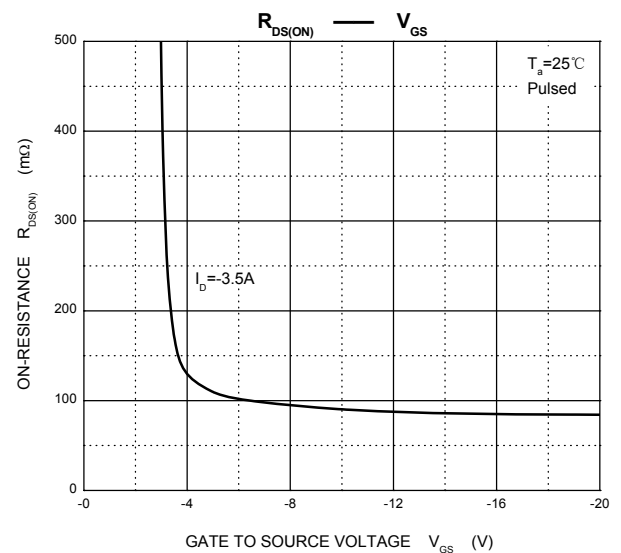
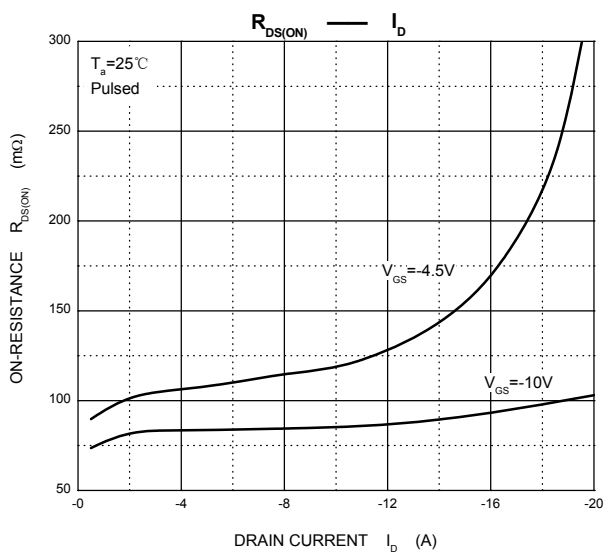
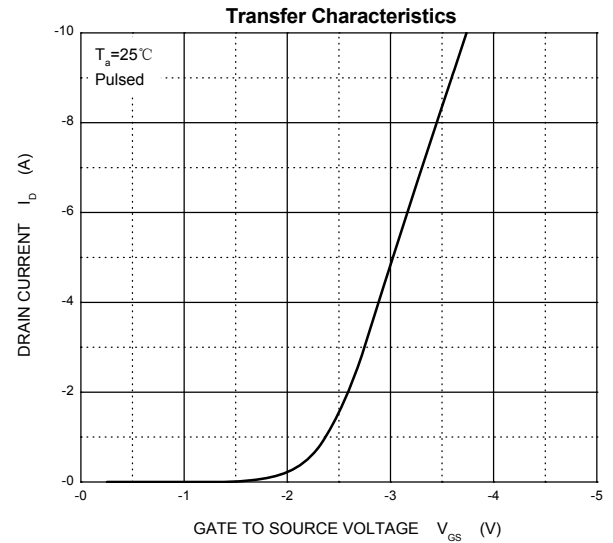
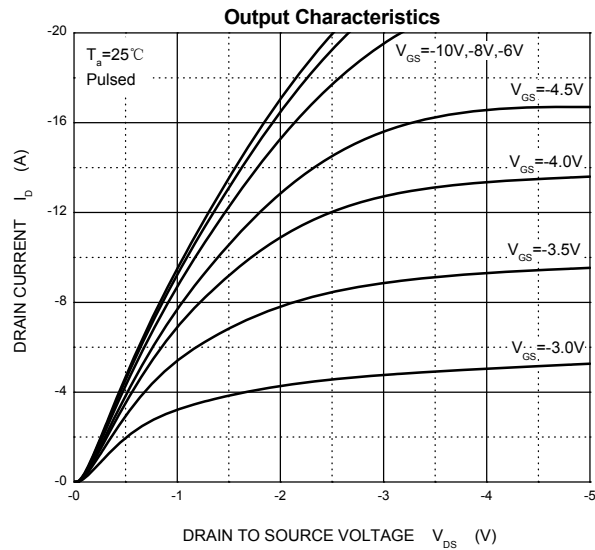
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =-250μA	-30			V
Gate-Source Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-1		-3	
Gate-Source Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
		V _{DS} =-30V, V _{GS} =0V, T _J =55°C			-10	
Drain-Source On-State Resistance ^c	R _{DS(on)}	V _{GS} =-4.5V, I _D =-2.5A		0.110	0.138	Ω
		V _{GS} =-10V, I _D =-3.5A		0.073	0.088	
Forward Transconductance ^c	g _{fs}	V _{DS} =-10V, I _D =-3.5A		7		S
Dynamic ^d						
Input Capacitance	C _{iss}	V _{DS} =-15V,V _{GS} =0V,f =1MHz		340		pF
Output Capacitance	C _{oss}			67		
Reverse Transfer Capacitance	C _{rss}			51		
Total Gate Charge	Q _g	V _{DS} =-15V,V _{GS} =-4.5V, I _D =-2.5A		4.1	6.2	nC
Gate-Source Charge	Q _{gs}			1.3		
Gate-Drain Charge	Q _{gd}			1.8		
Gate Resistance	R _g	f =1MHz		10		Ω
Turn-On Delay Time	t _{d(on)}	V _{DD} =-15V, R _L =15Ω, I _D =-1A, V _{GEN} =-4.5V,R _g =1Ω		40	60	ns
Rise Time	t _r			40	60	
Turn-Off Delay Time	t _{d(off)}			20	40	
Fall Time	t _f			17	30	
Drain-source Body diode characteristics						
Body Diode Voltage	V _{SD}	I _S =-0.75A, ,V _{GS} =0		-0.8	-1.2	V

Notes:

- $t = 5s$.
- Surface mounted on 1" x 1" FR4 board.
- Pulse Test : Pulse Width < 300 μs , Duty Cycle $\leq 2\%$.
- Guaranteed by design, not subject to production testing.



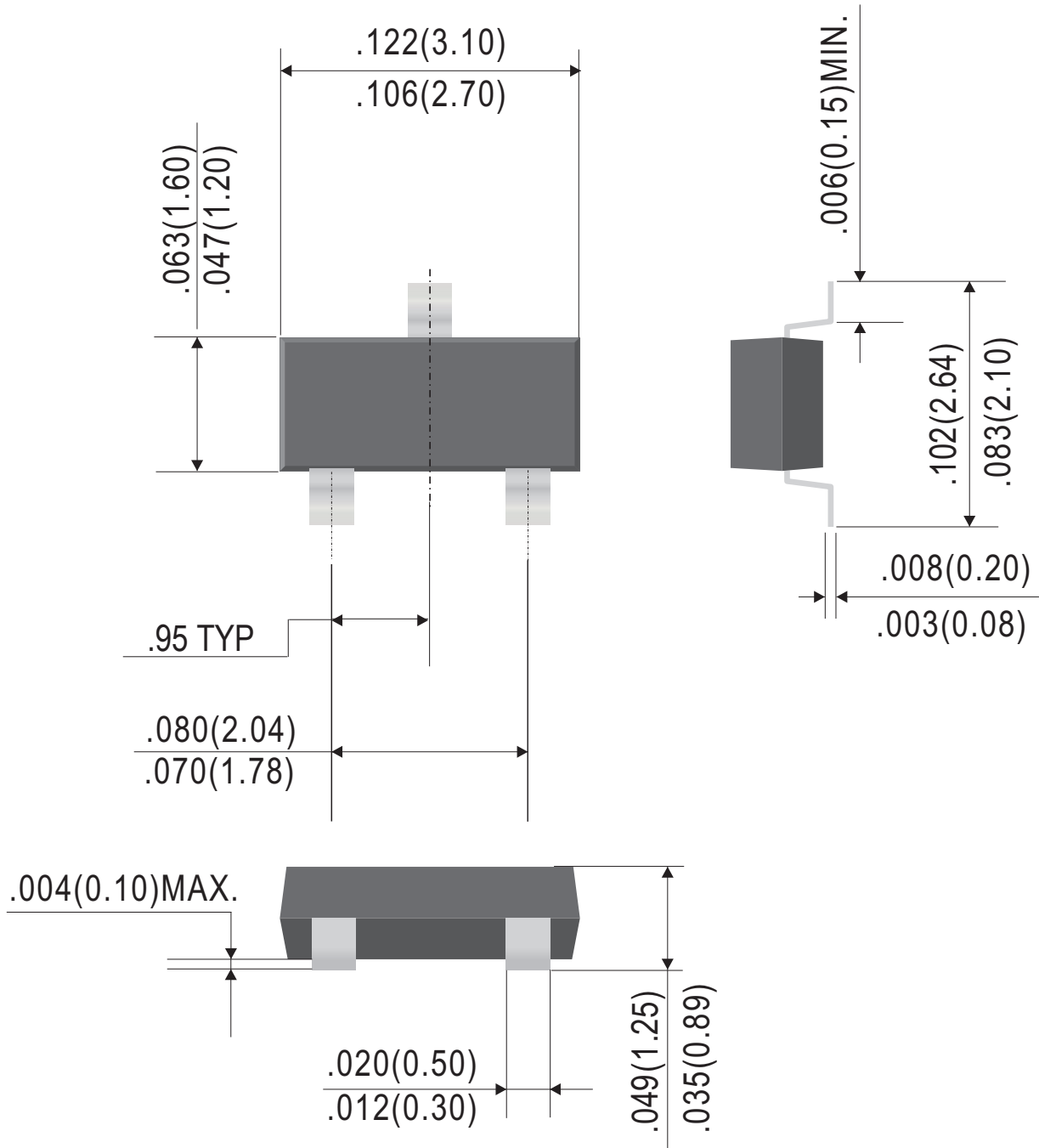
Typical Characteristics





Outline Drawing

SOT-23

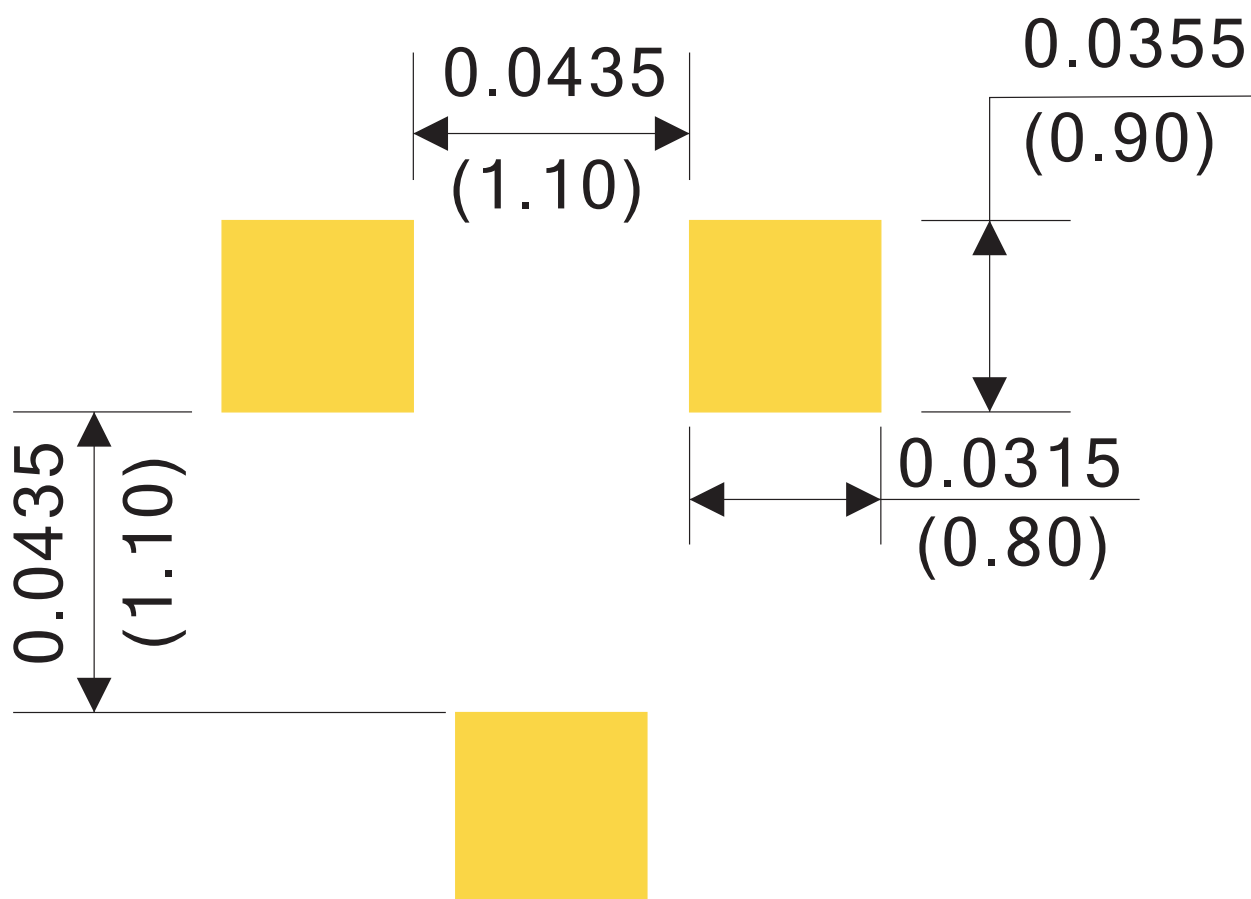


Dimensions in inches and (millimeters)

Rev.E

Suggested Soldering Pad Layout

SOT-23



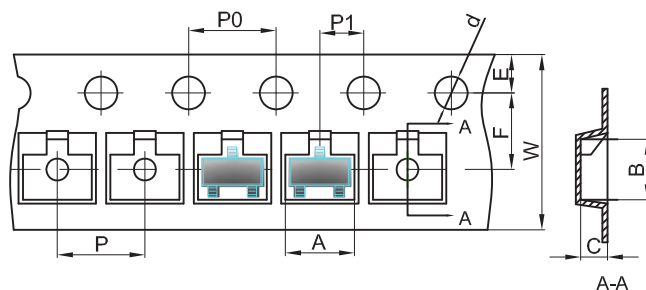
Dimensions in inches and (millimeters)

RevA



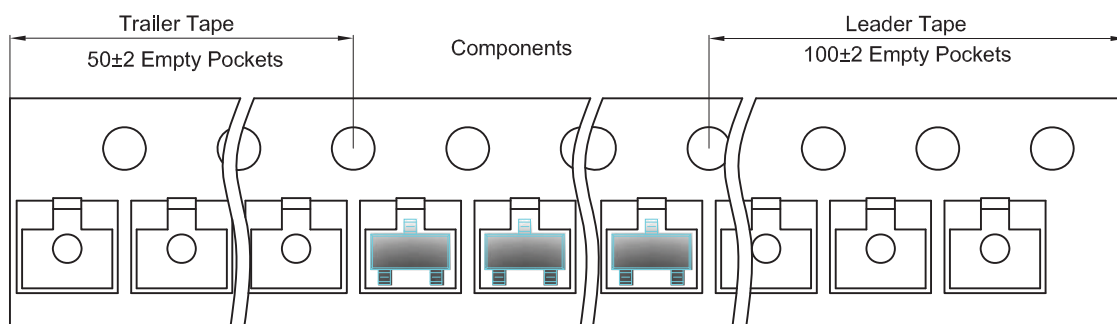
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

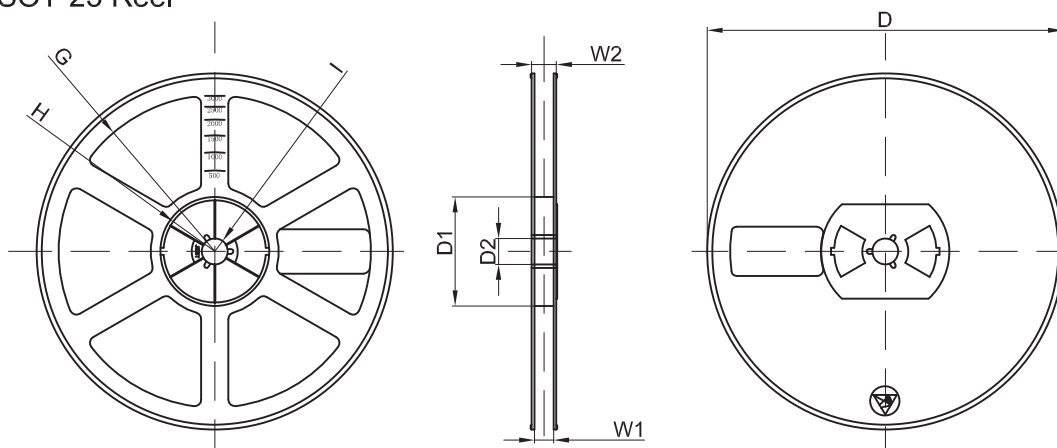


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

SOT-23 Tape Leader and Trailer



SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1

Ordering Information:

Device PN	Packing
{9НОЛТ -T ⁽¹⁾ G ⁽²⁾ -WS	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

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

Disclaimer

WILLAS reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. WILLAS or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on WILLAS data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. WILLAS does not assume any liability arising out of the application or use of any product or circuit.

This is the preliminary specification. WILLAS products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of WILLAS. Customers using or selling WILLAS components for use in such applications do so at their own risk and shall agree to fully indemnify WILLAS Inc and its subsidiaries harmless against all claims, damages and expenditures.