

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-30V	46mΩ@-10V	-5A
	65mΩ@-4.5V	

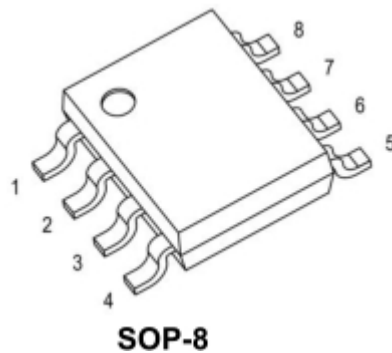
Feature

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$ and Low Gate Charge

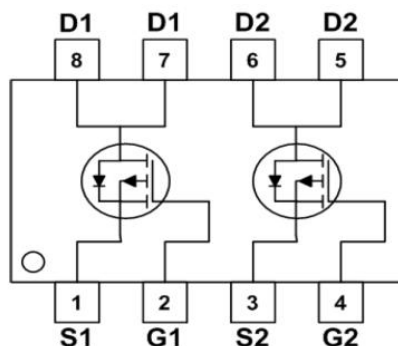
Application

- Load Switch for Portable Devices
- Battery Switch

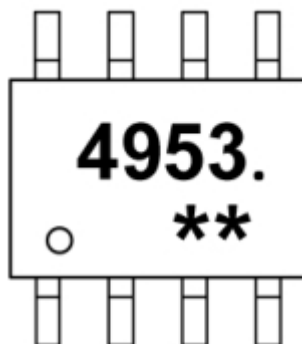
Package



Circuit diagram



Marking



4953. = Device code

** = Week Code

Absolute maximum ratings

($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current($t \leq 10\text{s}$)	I_D	-5	A
Power Dissipation($t \leq 10\text{s}$)	P_D	1.25	W
Thermal Resistance from Junction to Ambient($t \leq 10\text{s}$)	$R_{\theta JA}$	100	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

Electrical characteristics

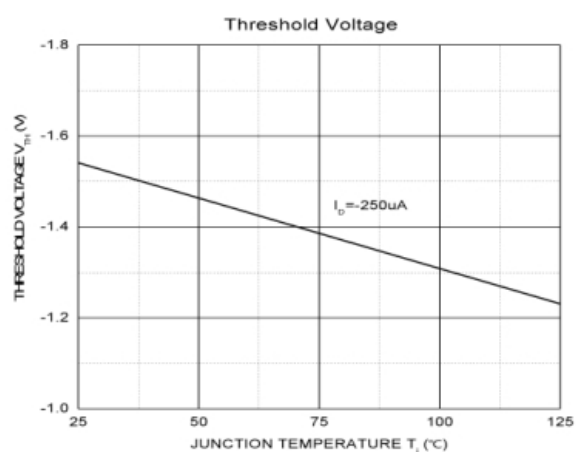
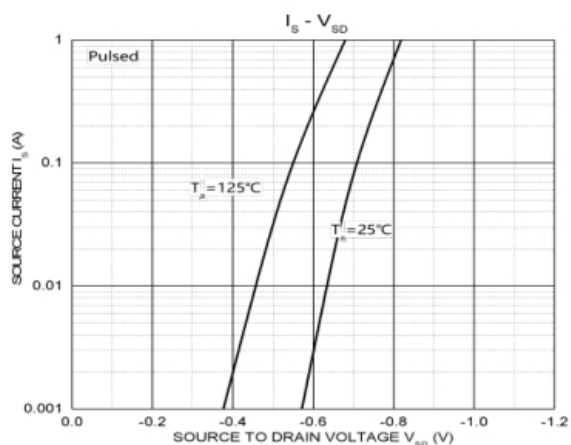
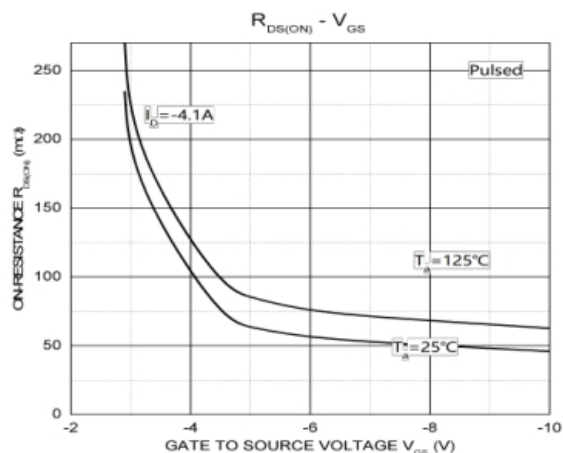
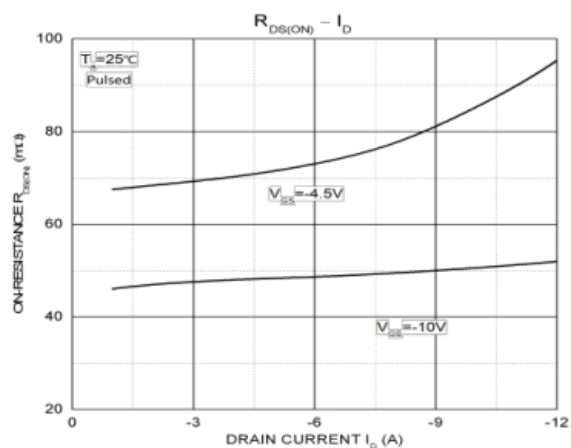
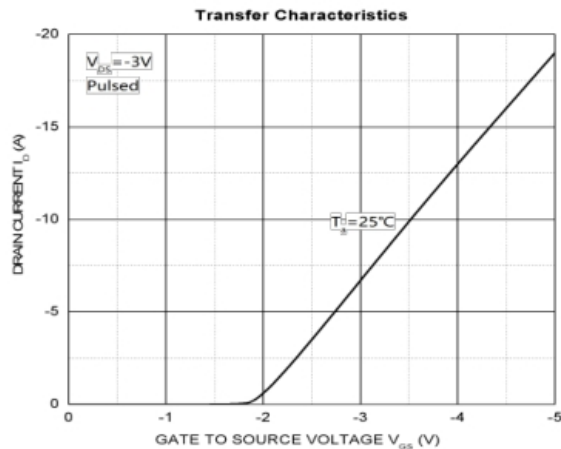
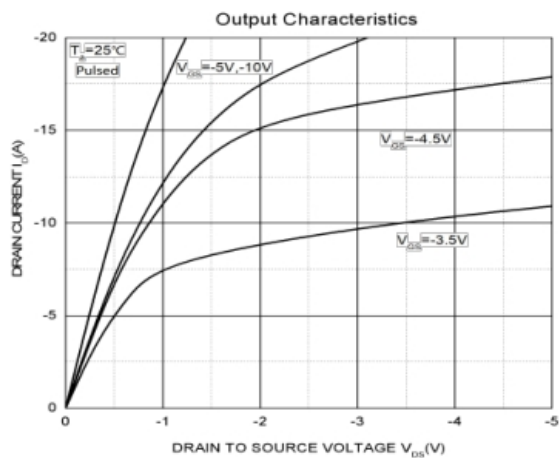
($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Off characteristics						
Drain-source breakdown voltage	BV (BR)DSS	V _{GS} = 0V, I _D = -250μA	-30.5			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -30V, V _{GS} = 0V			-1	uA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±0.1	uA
Gate threshold voltage ¹⁾	V _{GS(th)}	V _{DS} =V _{GS} , I _D = -250μA	-1.0	-1.5	-2.5	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} = -10V, I _D = -4.1A		46	60	mΩ
		V _{GS} = -4.5V, I _D = -3A		65	90	
Forward transconductance ¹⁾	g _{FS}	V _{DS} =0V, I _S = -1.7A			-1.2	S
Dynamic characteristics ²⁾						
Input Capacitance	C _{iss}	V _{DS} = -25V,V _{GS} =0V, Frequency =1MHz		992		pF
Output Capacitance	C _{oss}			215		
Reverse Transfer Capacitance	C _{rss}			170		
Switching Characteristics						
Turn-on Delay Time	T _{d(on)}	V _{DD} = -15V , I _D = -2A, V _{GEN} = -10V ,R _G =7.5Ω		11		nS
Turn-on Rise Time	T _r			14		
Turn-Off Delay Time	T _{d(off)}			20		
Turn-Off Fall Time	t _f			12		
Total gate charge	Q _g	V _{DS} = -15V, V _{GS} = -10V, I _D = -4.6A		17.5		nC
Gate-source charge	Q _{gs}			1.8		
Gate-drain charge	Q _{gd}			1.5		
Source-Drain Diode Characteristics						
Diode forward voltage	V _{SD}	I _S = -1.7A, V _{GS} = 0			-1.2	V

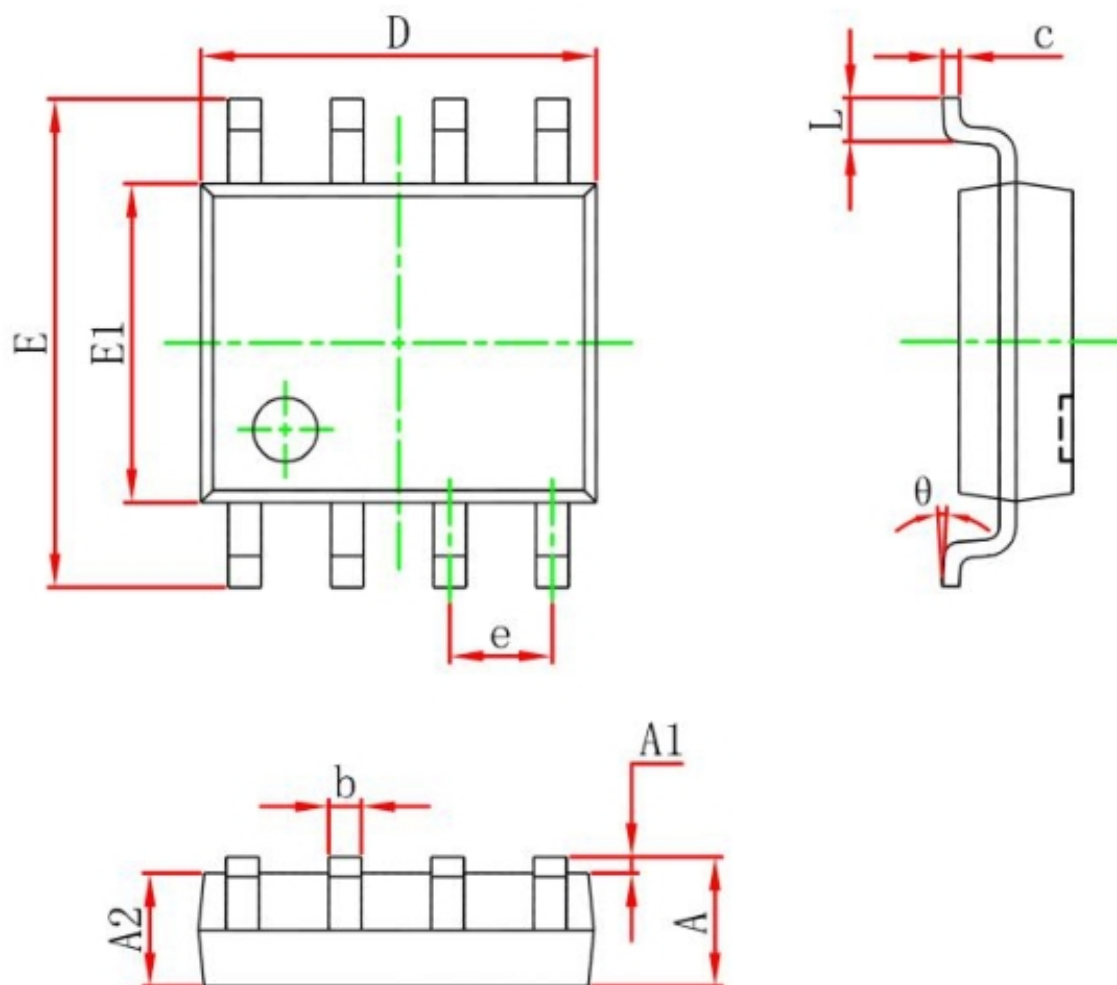
Notes:

1. Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. Guaranteed by design, not subject to production testing.

Typical Characteristics



SOP-8 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	1.35	1.75
A1	0.10	0.25
A2	1.35	1.55
b	0.33	0.51
c	0.17	0.25
D	4.80	5.00
e	1.27 REF.	
E	5.80	6.20
E1	3.80	4.00
L	0.40	1.27
θ	0°	8°