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FEATURES

VDS	VGS	RDSon TYP	ID
-30V	12V	51mR@-10V	-4A
		60mR@-4V5	
		98mR@-2V5	

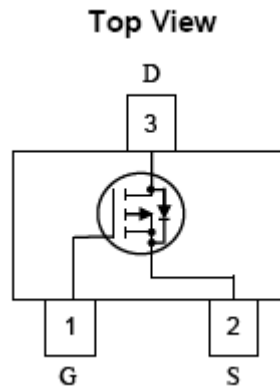
DESCRIPTION

This device is particularly suited for low voltage application such as portable equipment, power management and other battery powered circuits, and low in-line power dissipation are needed in a very small outline surface mount package Excellent thermal and electrical capabilities.

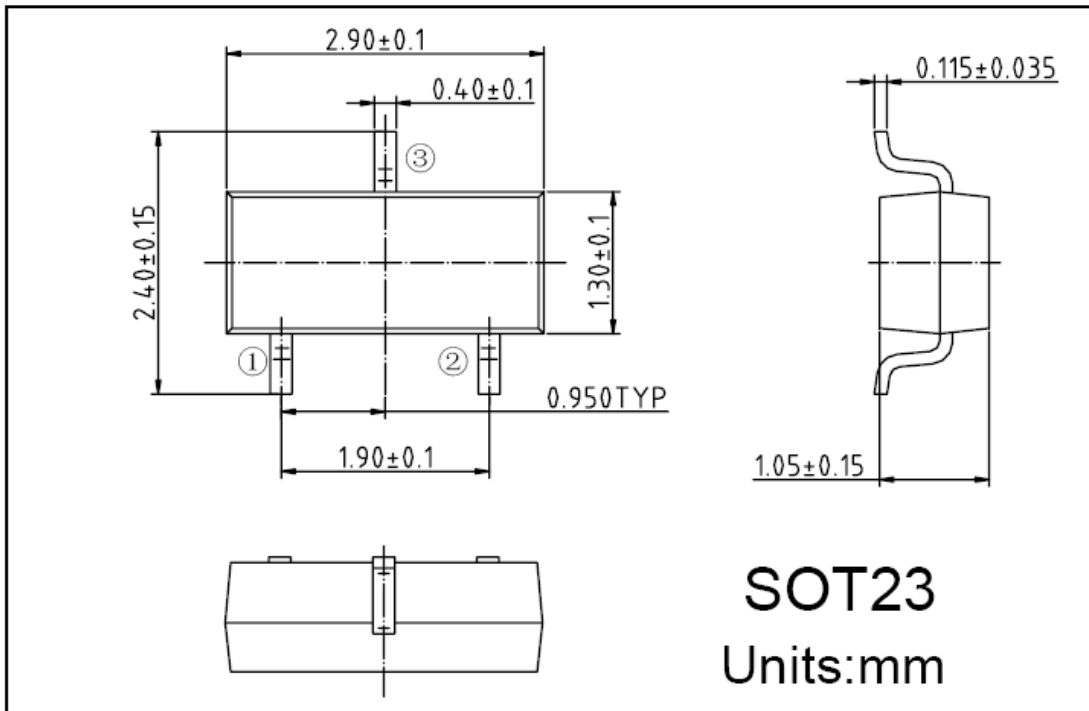
APPLICATIONS

- Load Switch
- Portable Devices
- DCDC conversion

Pin Configuration



Packaging Information



Absolute Maximum Ratings @TA=25°C unless otherwise noted

Parameter	Symbol	Limit	Unit	
Drain-Source Voltage	V _{dss}	-30	V	
Gate-Source Voltage	V _{gss}	±12	V	
Drain Current (Note 1)	Continuous	I _d	-4	A
	Pulsed	I _{dm}	-30	A
Continuous Power Dissipation	P _d	800	mW	
Operating and Storage Temperature Range	T _j ,T _{stg}	-55~150	°C	

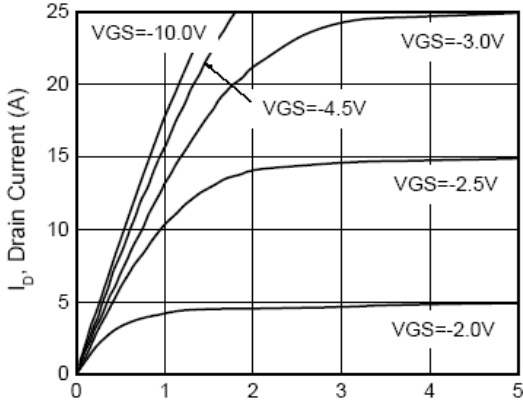
Electrical Characteristics @TA=25°C unless otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Zero Gate Voltage Drain Current	I _{dss}	V _{gs} =0V, V _{ds} =-30 V	--	--	-1	uA
Gate - Body Leakage, Forward	I _{gssf}	V _{gs} =-12V	--	--	-100	nA
Gate-Body Leakage, Reverse	I _{gssr}	V _{gs} =12V	--	--	100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{gs(th)}	V _{ds} =V _{gs} ,I _d =-250μA	-0.7	-1	-1.3	V
Static Drain-Source On-Resistance	R _{ds(on)}	V _{gs} =-10V,I _d =-4.2A	--	51	55	mR
		V _{gs} =-4.5V,I _d =-4A	--	60	65	
		V _{gs} =-2.5V,I _d =-1A	--	98	120	
DYNAMIC CHARACTERISTICS						
Input Capacitance	C _{iss}	V _{ds} =-30V,V _{gs} =0V f =200KHz	--	600	--	pF
Output Capacitance	C _{oss}		--	85	--	
Reverse Transfer Capacitance	C _{rss}		--	66	--	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	T _{d(on)}	V _{ds} =-15V,R _l =3.6R, V _{gs} =-10V,R _{gen} =6R	--	6.5	--	ns
Rise Time	T _r		--	3.5	--	
Turn-Off Delay Time	T _{d(off)}		--	40	--	
Fall Time	T _f		--	13	--	
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
Drain-Source Diode Forward Voltage	V _{sd}	I _s =-1A,V _{gs} =0V	--	-0.78	-1	V

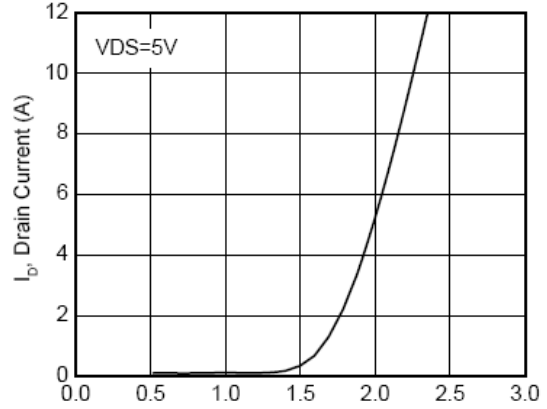
Notes :

- R_{θJA}** is the sum of the junction-to-case and case-to-ambient thermal resistance where the case thermal reference is defined as the solder mounting surface of the drain pins. **R_{θJC}** is guaranteed by design while **R_{θCA}** is determined by the user's board design.
- Pulse Test:** Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%

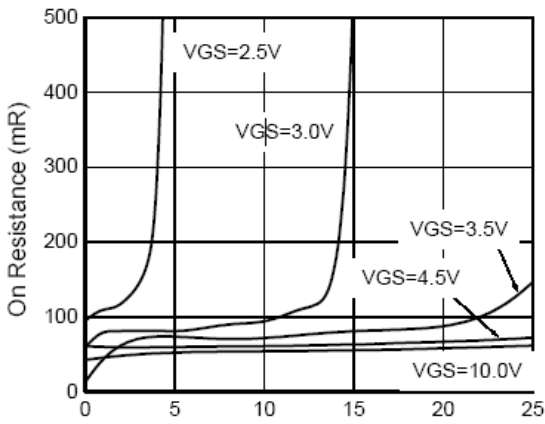
P-channel Typical Performance Characteristics



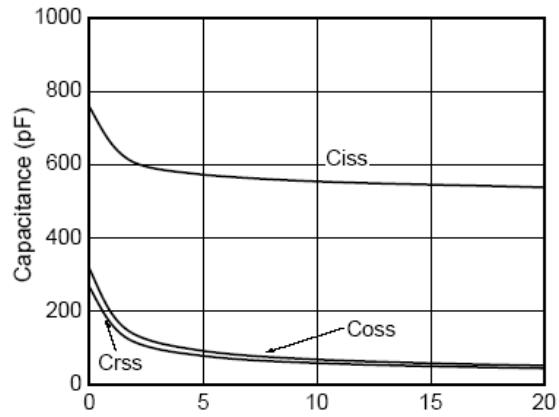
V_{ds} , Drain-Source Voltage (V)
Figure 1. Output Characteristics



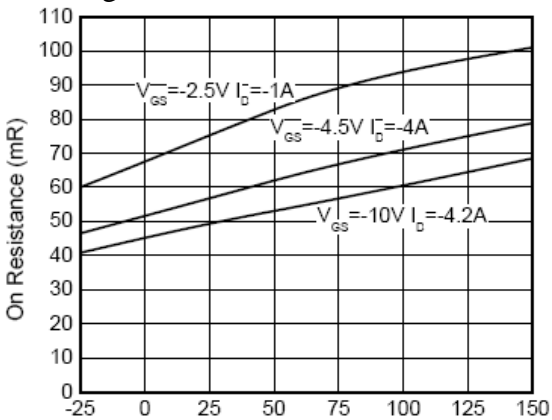
V_{gs} , Gate-to-Source Voltage (V)
Figure 2. Transfer Characteristics



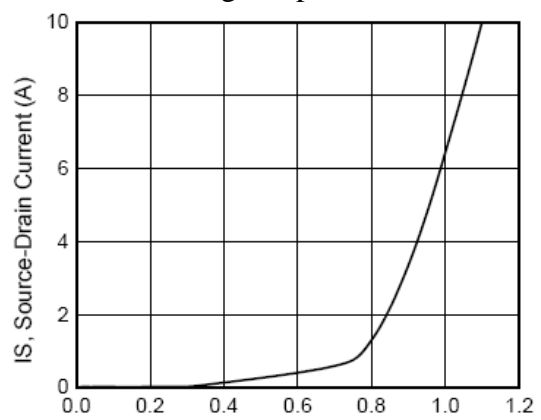
I_d , Drain Current (A)
Fig3. On Resistance vs. Drain Current



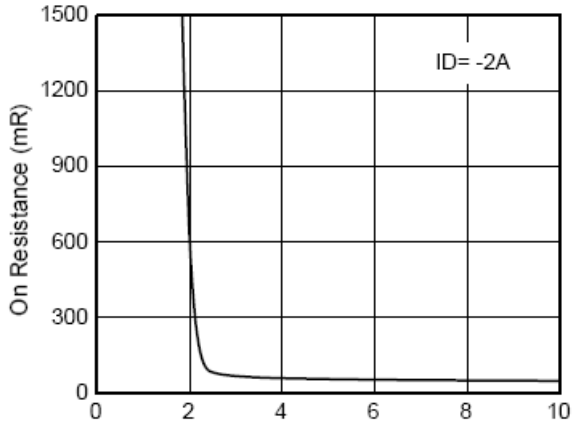
V_{DS} , Drain-Source Voltage (V)
Fig4. Capacitance



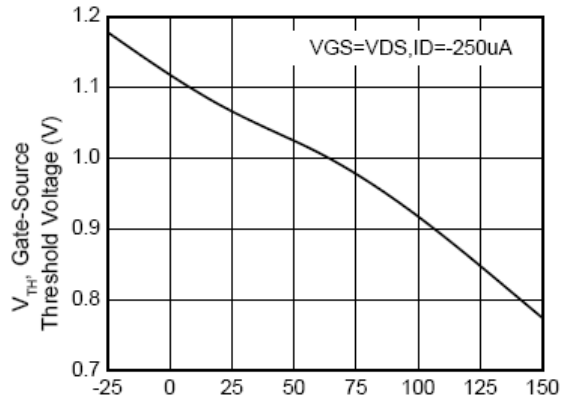
T_j , Junction Temperature (°C)
Fig5. On resistance vs. Temperature



V_{DS} , Drain-Source Voltage (V)
Fig6. Diode Forward Characteristics



Vgs, Gate-to-Source Voltage (V)
Fig7. On Resistance vs. G-S Voltage



Tj, Junction Temperature (°C)
Fig8. Gate Threshold vs. Temperature