



Product Summary

V _{(BR)DSS}	R _{DS(on)TYP}	I _D
50V	0.95Ω@10V	0.3A
	1.0Ω@4.5V	
	1.2Ω@2.5V	
	1.8Ω@1.8V	

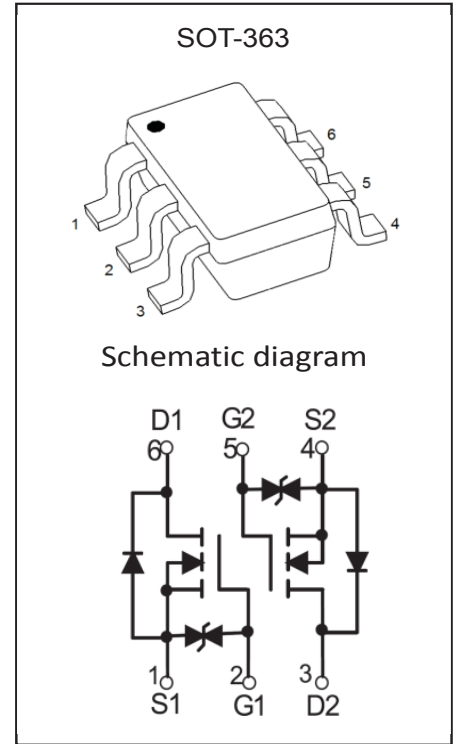
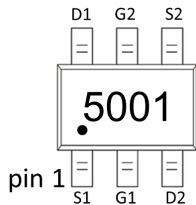
Feature

- Trench Technology Power MOSFET
- Low R_{DS(ON)}
- Low Gate Charge
- ESD Protected

Application

- Load Switch
- DC/DC Converter

MARKING:



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain - Source Voltage	V _{DS}	50	V
Gate - Source Voltage	V _{GS}	±20	V
Continuous Drain Current ^{1,5}	I _D	0.3	A
Pulsed Drain Current ²	I _{DM}	1.2	A
Power Dissipation ^{4,5}	P _D	150	mW
Thermal Resistance from Junction to Ambient ⁵	R _{θJA}	833	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~ +150	°C

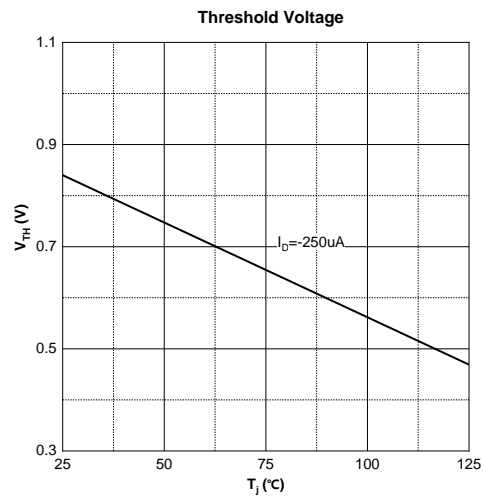
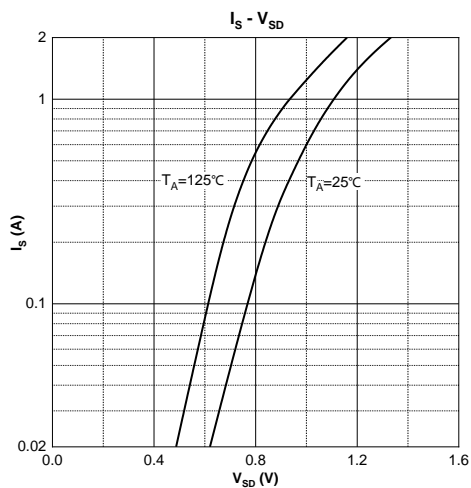
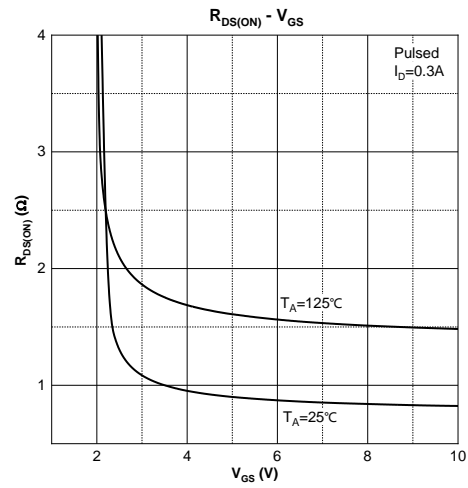
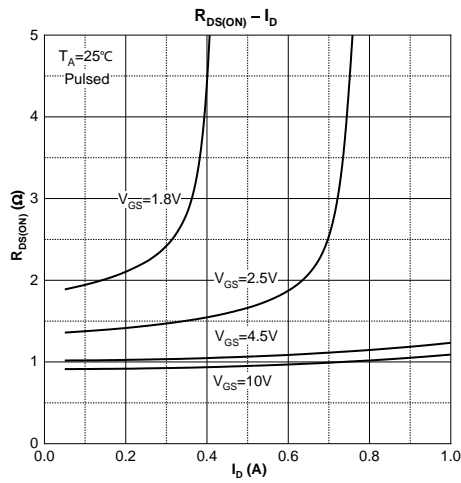
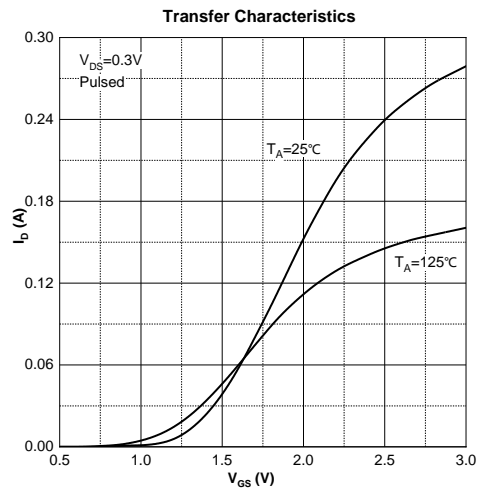
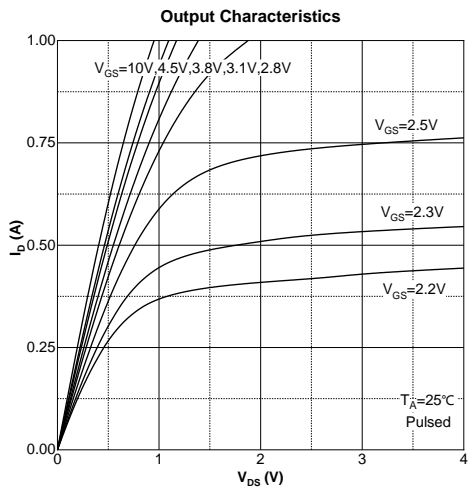
MOSFET ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Off Characteristics						
Drain - Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	50			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 50V, V _{GS} = 0V			1	μA
Gate - Body Leakage Current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±10	μA
On Characteristics³						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	0.5	0.9	1.5	V
Drain-source On-resistance	R _{DS(on)}	V _{GS} = 10V, I _D = 500mA		0.95	1.5	Ω
		V _{GS} = 4.5V, I _D = 200mA		1.0	2.0	
		V _{GS} = 2.5V, I _D = 100mA		1.2	4.0	
		V _{GS} = 1.8V, I _D = 10mA		1.8	5.2	
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} = 25V, V _{GS} = 0V, f = 1MHz		28.1		pF
Output Capacitance	C _{oss}			4.7		
Reverse Transfer Capacitance	C _{rss}			2.5		
Gate Resistance	R _g	V _{DS} = 0V, V _{GS} = 0V, f = 1MHz		162		Ω
Switching Characteristics						
Total Gate Charge	Q _g	V _{DS} = 15V, V _{GS} = 10V, I _D = 0.3A		1.4		nC
Gate-source Charge	Q _{gs}			0.5		
Gate-drain Charge	Q _{gd}			0.1		
Turn-on Delay Time	t _{d(on)}	V _{DD} = 30V, V _{GS} = 10V, I _D = 290mA, R _G = 6Ω			5	ns
Turn-on Rise Time	t _r				18	
Turn-off Delay Time	t _{d(off)}				36	
Turn-off Fall Time	t _f				14	
Source - Drain Diode Characteristics						
Diode Forward Voltage ³	V _{SD}	V _{GS} = 0V, I _S = 0.5A			1.2	V

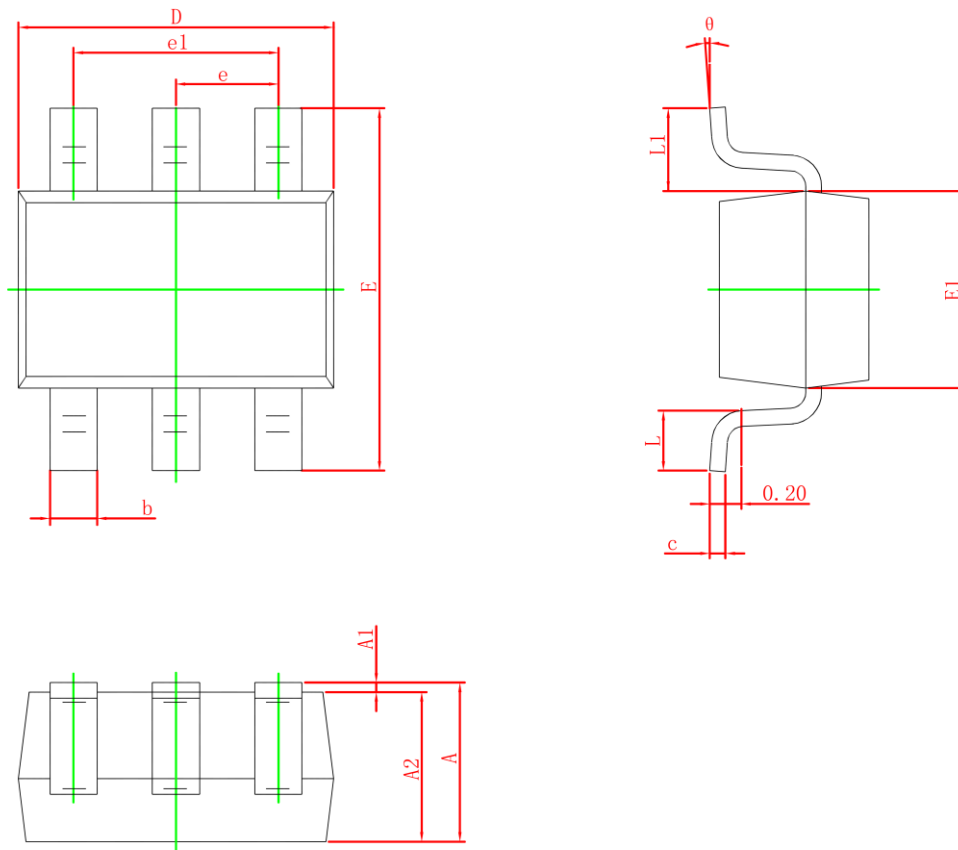
Notes :

- 1.The maximum current rating is limited by package.
- 2.Pulse Test : Pulse Width ≤ 10μs, duty cycle ≤ 1%.
- 3.Pulse Test : Pulse Width ≤ 300μs, duty cycle ≤ 2%.
- 4.The power dissipation P_D is limited by T_{J(MAX)} = 150°C.
- 5.Device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with T_A =25°C.

Typical Characteristics



SOT-363 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.000	0.035	0.039
A1	0	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.080	0.150	0.003	0.006
D	1.800	2.200	0.071	0.087
E	2.000	2.450	0.079	0.096
E1	1.150	1.350	0.045	0.053
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L1	0.525REF		0.021REF	
L	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°