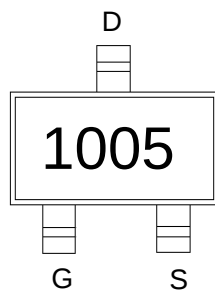


Features

- Low $R_{DS(on)}$ & FOM
- Extremely low switching loss
- Excellent stability and uniformity
- Fast switching and soft recovery

Application

- Consumer electronic power supply
- Motor control
- Synchronous-rectification
- Isolated DC/DC convertor

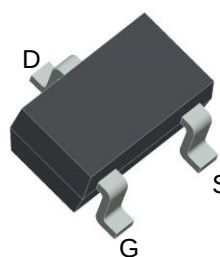


1005: Device code

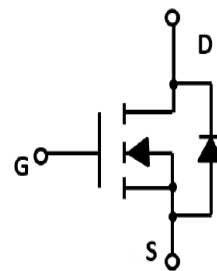
Marking and pin assignment

100V/5A N-Channel MOSFET Product Summary

V_{DS}	$R_{DS(on)}$ MAX	I_D MAX
100V	140mΩ@10V	5A
	170mΩ@4.5V	



SOT-23-3L top view



Schematic diagram



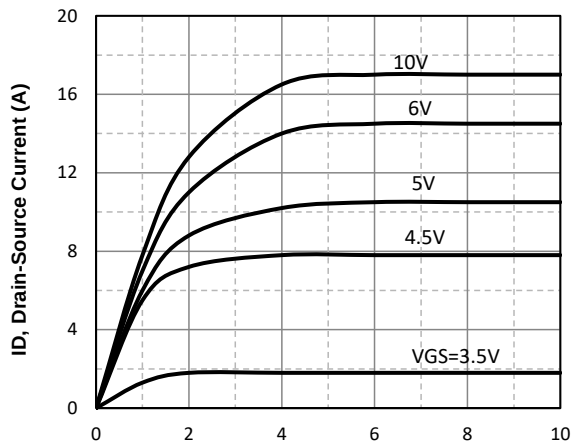
Absolute Maximum Ratings (TA=25°C unless otherwise noted)				
Symbol	Parameter		Rating	Unit
Common Ratings (TC=25°C Unless Otherwise Noted)				
V _{DS}	Drain-Source Breakdown Voltage		100	V
V _{GS}	Gate-Source Voltage		±20	V
T _J	Maximum Junction Temperature		150	°C
T _{STG}	Storage Temperature Range		-50 to 155	°C
I _S	Diode Continuous Forward Current	Tc=25°C	5	A
Mounted on Large Heat Sink				
I _{DM}	Pulse Drain Current Tested	Tc=25°C	19.6	A
I _D	Continuous Drain Current	Tc=25°C	5	A
P _D	Maximum Power Dissipation	Tc=25°C	5	W
R _{θJA}	Thermal Resistance Junction-Ambient		85	°C/W



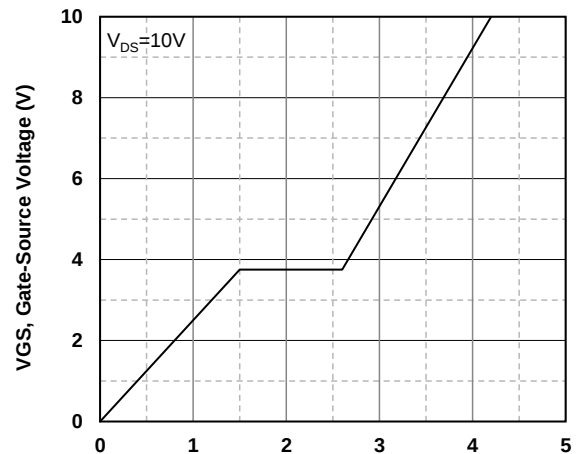
Electrical Characteristics (T _J =25℃ unless otherwise noted)						
Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ T _J = 25℃ (unless otherwise stated)						
B _{V(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250μA	100	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =100V, V _{GS} =0V	--	--	1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±20V, V _{DS} =0V	--	--	±100	nA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250μA	1	1.8	2.5	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} =10V, I _D =3A	--	105	140	mΩ
		V _{GS} =4.5V, I _D =2A	--	140	170	mΩ
Dynamic Electrical Characteristics @ T _J = 25℃ (unless otherwise stated)						
C _{ISS}	Input Capacitance	V _{DS} =50V, V _{GS} =0V, f=1MHz	--	212	--	pF
C _{OSS}	Output Capacitance		--	27.5	--	pF
C _{RSS}	Reverse Transfer Capacitance		--	1.6	--	pF
Switching Characteristics						
Q _g	Total Gate Charge	V _{DS} =50V, I _D =3A, V _{GS} =10V	--	3.3	--	nC
Q _{gs}	Gate Source Charge		--	0.35	--	nC
Q _{gd}	Gate Drain Charge		--	0.87	--	nC
t _{d(on)}	Turn-on Delay Time	V _{DS} =50V, I _D =3A, V _{GS} =10V, R _G =2Ω	--	13.2	--	nS
t _r	Turn-on Rise Time		--	2.2	--	nS
t _{d(off)}	Turn-Off Delay Time		--	11	--	nS
t _f	Turn-Off Fall Time		--	1.1	--	nS
Source- Drain Diode Characteristics						
V _{SD}	Forward on voltage	T _J =25℃, I _S =3A,	--	--	1.2	V



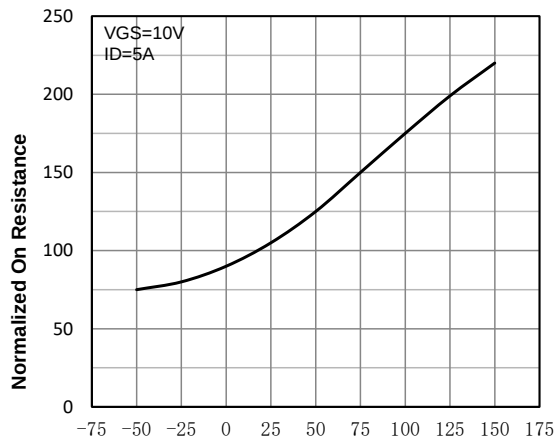
Typical Operating Characteristics



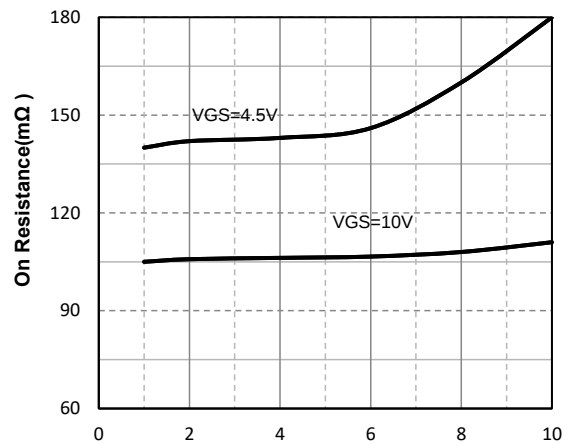
V_{DS}, Drain -Source Voltage (V)
Fig1. Typical Output Characteristics



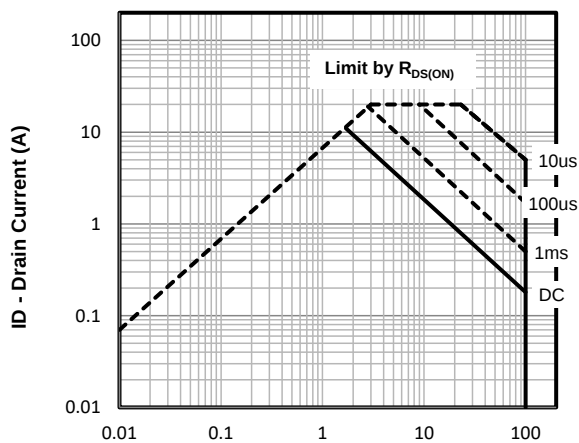
Q_g -Total Gate Charge (nC)
Fig2. Typical Gate Charge Vs. Gate-Source Voltage



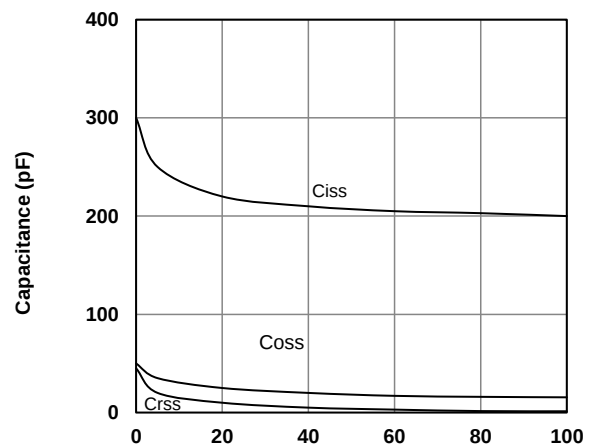
T_j - Junction Temperature (°C)
Fig3. Normalized On-Resistance Vs. Temperature



I_D, Drain-Source Current (A)
Fig4. On-Resistance Vs. Drain-Source Current



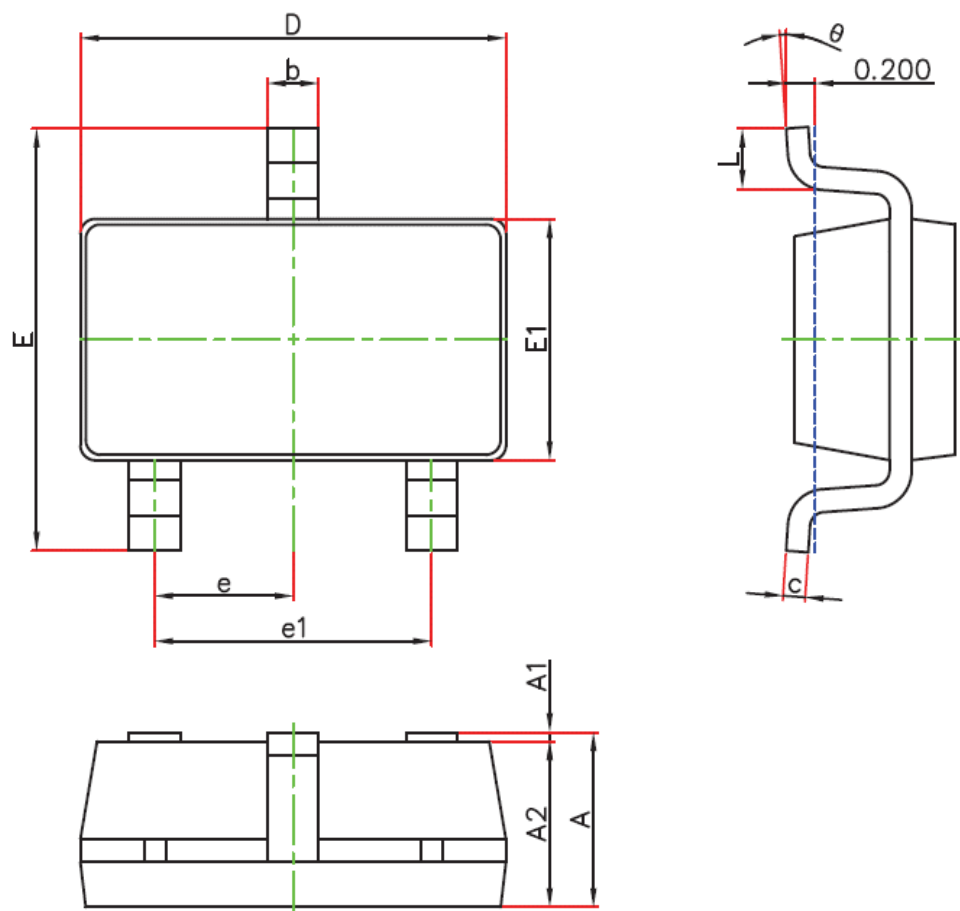
V_{DS}, Drain -Source Voltage (V)
Fig5. Maximum Safe Operating Area



V_{DS}, Drain-Source Voltage (V)
Fig6. Typical Capacitance Vs. Drain-Source Voltage



SOT-23-3L Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

单击下面可查看定价，库存，交付和生命周期等信息

[>>YONGYUTAI\(永裕泰\)](#)