

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
60V	1.7Ω@10V	300mA
	1.8Ω@4.5V	



合肥矽普半导体

Siliup Semiconductor Technology Co., Ltd

技术 品质 服务

www.siliup.com

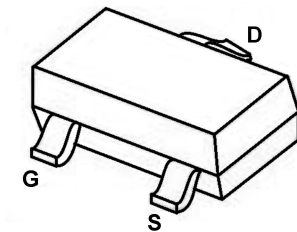
Feature

- High power and current handing capability
- Surface mount package
- ESD protected 2KV

Application

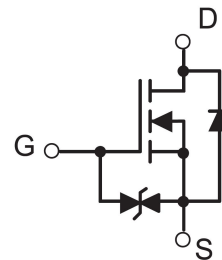
- Battery Switch
- DC/DC Converter

Package

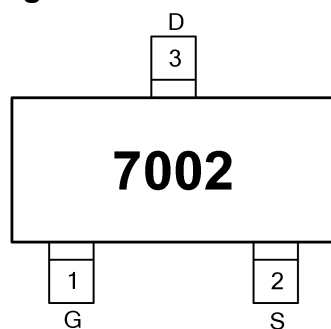


SOT-23

Circuit diagram



Marking



7002 :Device Code

Order Information

Device	Package	Unit/Tape
2N7002B	SOT-23	3000

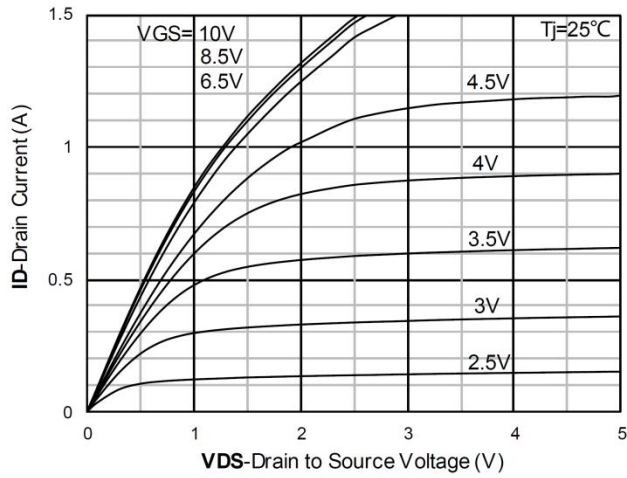
Absolute maximum ratings (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	300	mA
Pulse Drain Current Tested	I_{DM}	1200	mA
Power Dissipation	P_D	350	mW
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	357	°C/W
Storage Temperature Range	T_{STG}	-55 to 150	°C
Operating Junction Temperature Range	T_J	-55 to 150	°C

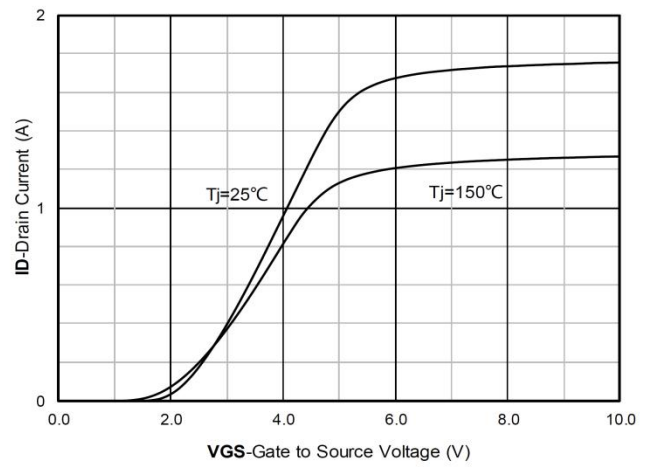
Electrical characteristics (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	VGS=0V , ID=250μA	60	-	-	V
Drain-Source Leakage Current	IDSS	VDS=48V , VGS=0V	-	-	1	uA
Gate-Source Leakage Current	IGSS	VGS=±20V , VDS=0V	-	-	±10	uA
Gate Threshold Voltage	VGS(th)	VDS=VGS , ID=250μA	1	1.5	2.5	V
Static Drain-Source On-Resistance	RDS(ON)	VGS =10V, ID =500mA	-	1.7	3	Ω
		VGS =4.5V, ID =200mA	-	1.8	4	
Dynamic characteristics						
Input Capacitance	Ciss	VDS=25V , VGS=0V , f=1MHz	-	28	-	pF
Output Capacitance	Coss		-	10	-	
Reverse Transfer Capacitance	Crss		-	5	-	
Total Gate Charge	Qg	VDS=10V , VGS=4.5V , ID=300mA	-	1.7	-	nC
Gate-Source Charge	Qgs		-	0.35	-	
Gate-Drain Charge	Qgd		-	0.5	-	
Switching Characteristics						
Turn-On Delay Time	td(on)	VDD=30V VGS=10V , RG=25Ω , ID=300mA	-	3	-	nS
Turn-On Rise Time	tr		-	17	-	
Turn-Off Delay Time	td(off)		-	10	-	
Turn-Off Fall Time	tr		-	21	-	
Source-Drain Diode characteristics						
Diode Forward Voltage	VSD	VGS=0V , IS=1A , TJ=25℃	-	-	1.2	V

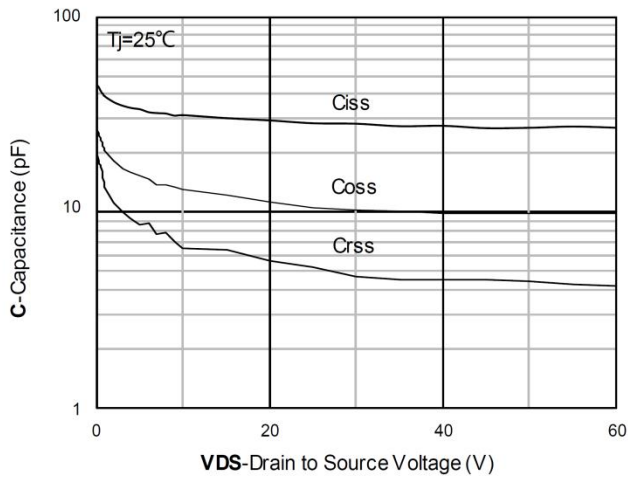
Typical Characteristics



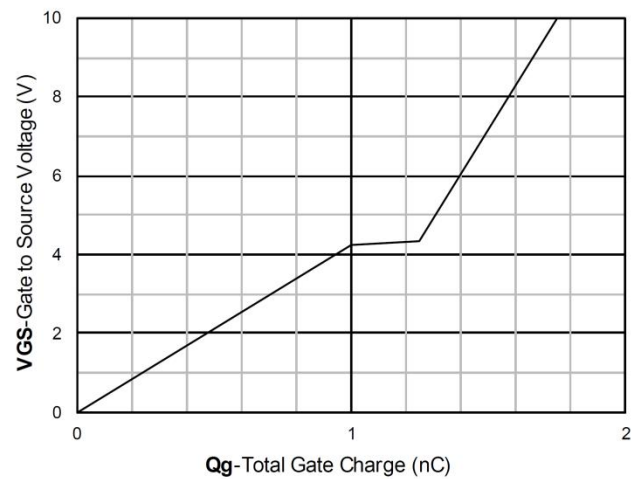
Output Characteristics



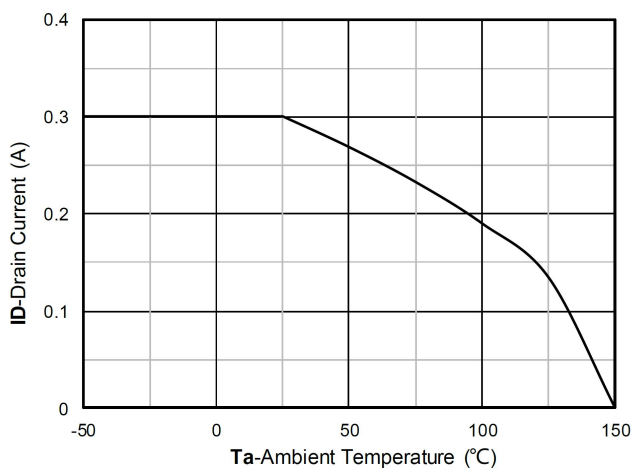
Transfer Characteristics



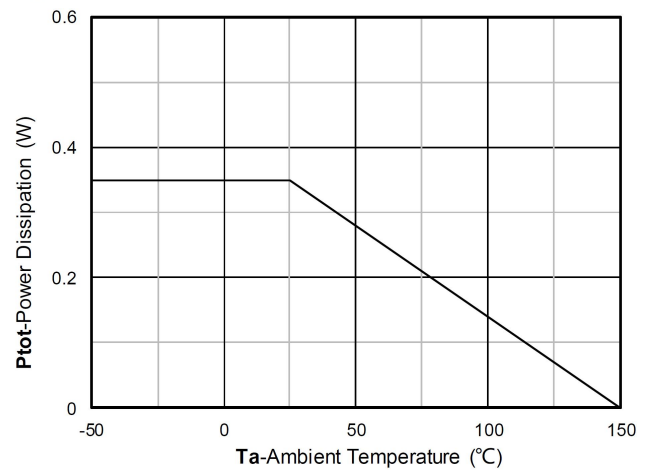
Capacitance Characteristics



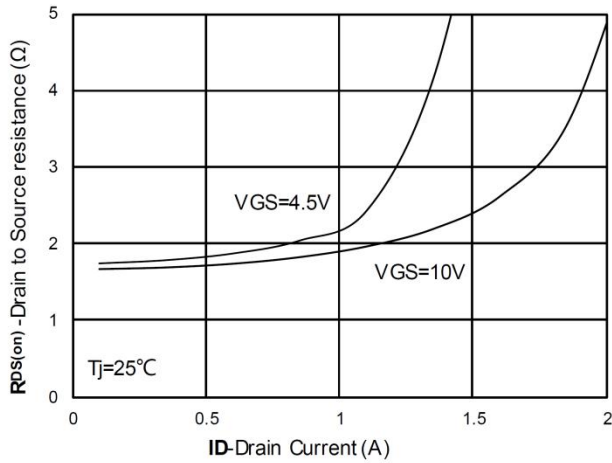
Gate Charge



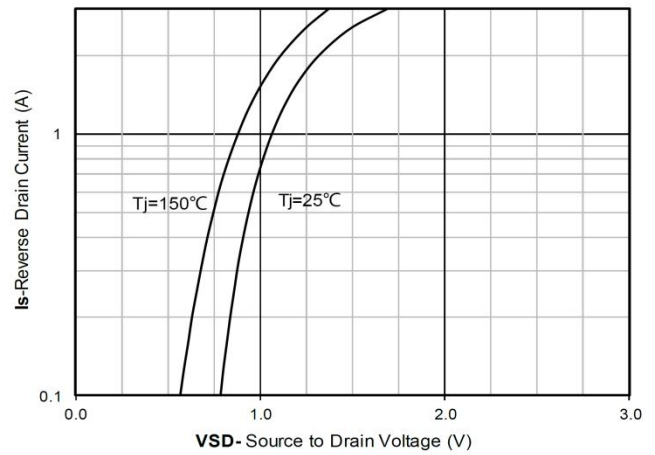
Current dissipation



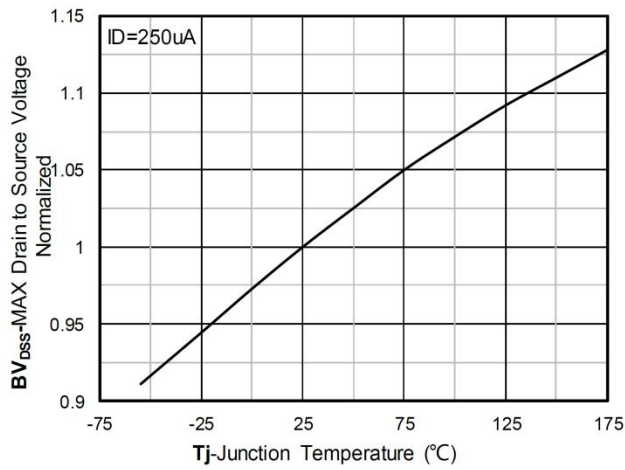
Power dissipation



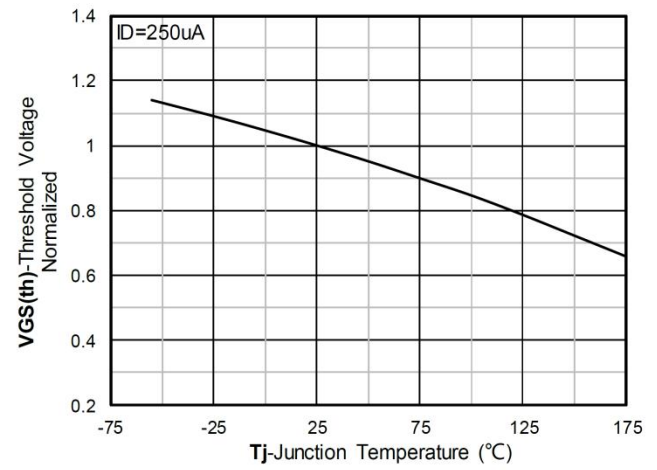
$R_{DS(on)}$ VS Drain Current



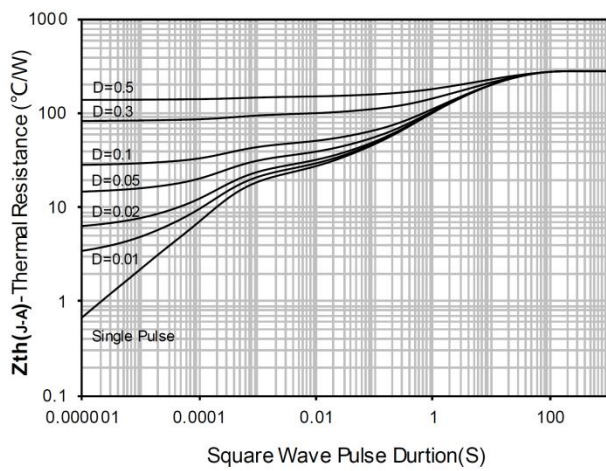
Forward characteristics of reverse diode



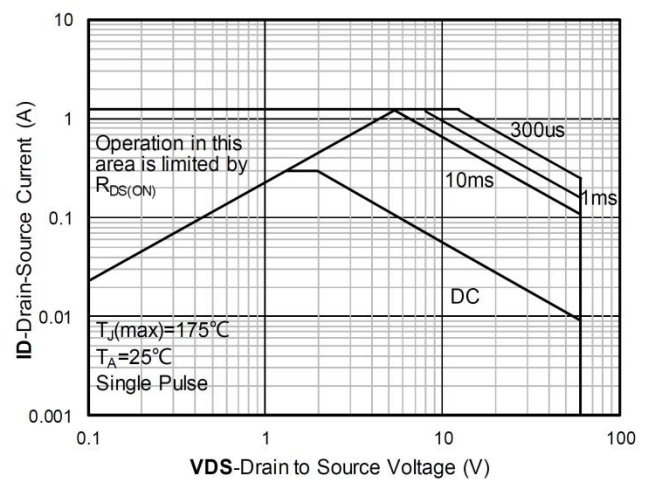
Normalized breakdown voltage



Normalized Threshold voltage



Maximum Transient Thermal Impedance



Safe Operation Area

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [MOSFETs](#) category:

Click to view products by [Siliup](#) manufacturer:

Other Similar products are found below :

[MCH3443-TL-E](#) [MCH6422-TL-E](#) [NTNS3A92PZT5G](#) [IRFD120](#) [2SK2464-TL-E](#) [2SK3818-DL-E](#) [2SJ277-DL-E](#) [2SK2267\(Q\)](#) [MIC4420CM-TR](#) [IRFS350](#) [IPS70R2K0CEAKMA1](#) [AON6932A](#) [2SK2614\(Te16L1,Q\)](#) [DMN1017UCP3-7](#) [EFC2J004NUZTDG](#) [SCM040600](#) [NTE2384](#) [2N7000TA](#) [DMN2080UCB4-7](#) [US6M2GTR](#) [DMN31D5UDJ-7](#) [DMP22D4UFO-7B](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#) [STF5N65M6](#) [IRF40H233XTMA1](#) [STU5N65M6](#) [DMN13M9UCA6-7](#) [STU7N60DM2](#) [DMTH10H4M6SPS-13](#) [DMN2990UFB-7B](#) [2N7002W-G](#) [MCQ7328-TP](#) [IPB45P03P4L11ATMA2](#) [BXP4N65F](#) [BXP2N20L](#) [BXP2N65D](#) [TSM60NB380CP](#) [ROG](#) [SLF10N65ABV2](#) [IRF9395MTRPBF](#) [FCMT080N65S3](#) [NTD5C632NLT4G](#) [NTMFS0D55N03CGT1G](#) [NTMFS1D15N03CGT1G](#) [NTMTS0D4N04CTXG](#) [NTMYS2D1N04CLTWG](#) [NVD360N65S3T4G](#) [NVD5C464NLT4G](#) [NVMTS001N06CLTXG](#) [NVMTS1D1N04CTXG](#)