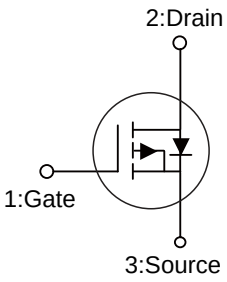
■ PRODUCT CHARACTERISTICS

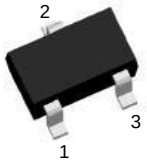
V_{DSS}	-20V
$R_{DS(ON)}$ Typ(@V_{GS}=-4.5V)	60mΩ
$R_{DS(ON)}$ Typ(@V_{GS}=-2.5V)	80mΩ
I_D	-3A

Symbol



■ APPLICATIONS

* High efficiency switch mode power supplies
* Electronic lamp ballasts based on half bridge
* LED power supplies



SOT-23

■ FEATURE

* High Switching Speed
* Improved dv/dt capability

■ ORDER INFORMATION

Order Codes		Package	Packing
Halogen-Free	Halogen		
N/A	NXV65UP	SOT-23	3000 pieces/Reel

■ ABSOLUTE MAXIMUM RATINGS(T_A=25°C,unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DSS}	-20	V
Gate-Source Voltage	V_{GSS}	±12	V
Drain Current Continuous(@V_{GS}=-4.5V ,T_A=25°C)	I_D	-3	A
Drain Current Pulsed	I_{DM}	-12	A
Power Dissipation	P_D	1.25	W
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55~ +150	°C

■ THERMAL CHARACTERISTICS

Parameter	Symbol	Typ	Unit
Junction to Ambient	R_{thJA}	100	°C/W

■ ELECTRICAL CHARACTERISTICS (T_C=25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Off characteristics						
Drain to Source Breakdown Voltage	V_{DSS}	V_{GS}=0V,I_D=-250μA	-20	-	-	V
Drain to Source Leakage Current	I_{DSS}	V_{DS}=-20V,V_{GS}=0V	-	-	-1	μA
Gate to Source Forward Leakage	$I_{GSS(F)}$	V_{GS}=+12V,V_{DS}=0V	-	-	100	nA
Gate to Source Reverse Leakage	$I_{GSS(R)}$	V_{GS}=-12V ,V_{DS}=0V	-	-	-100	nA
On characteristics						
Drain to Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-4.5V,I_D=-3 A	-	60	80	mΩ
		V_{GS}=-2.5V,I_D=-2 A	-	80	100	mΩ
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS}=V_{GS},I_D=-250μA	-0.4	-0.67	-1	V
Dynamic characteristics						
Input Capacitance	C_{iss}	V_{DS}=-10V,V_{GS}=0V f=1.0MHz	-	415	-	pF
Output Capacitance	C_{oss}		-	223	-	pF
Reverse Transfer Capacitance	C_{rss}		-	87	-	pF
Resistive Switching Characteristics						
Turn-on Delay Time	$t_{d(ON)}$	V_{GS}=-4.5V,V_{DS}=-10V, I_D=-2 A ,R_G=6Ω	-	13	-	ns
Rise Time	t_r		-	36	-	ns
Turn-off Delay Time	$t_{d(OFF)}$		-	42	-	ns
Fall Time	t_f		-	34	-	ns
Total Gate Charge	Q_g	I_D=-2A, V_{DS}=-10V V_{GS}=-4.5V	-	5.8	-	nC
Gate to Source Charge	Q_{gs}		-	1	-	nC
Gate to Drain("Miller") Charge	Q_{gd}		-	2	-	nC
Source-Drain Diode Characteristics						
Continuous Source Current(Body Diode)	I_S		-	-	-3	A
Maximum Pulsed Current(Body Diode)	I_{SM}		-	-	-12	A
Diode Forward Voltage	V_{SD}	I_{SD}=-1A, V_{GS}=0V	-	-0.81	-1.2	V

■ TYPICAL CHARACTERISTICS

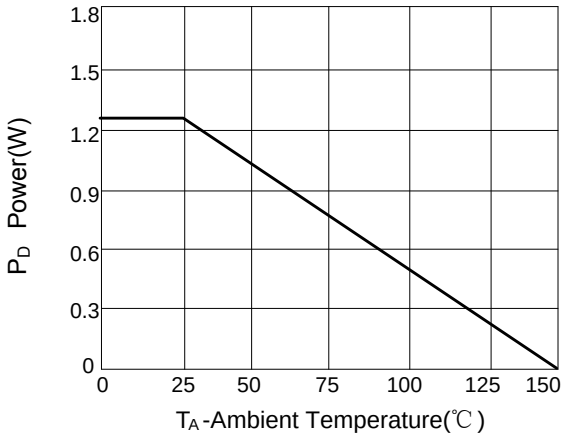


Figure 1: Power dissipation

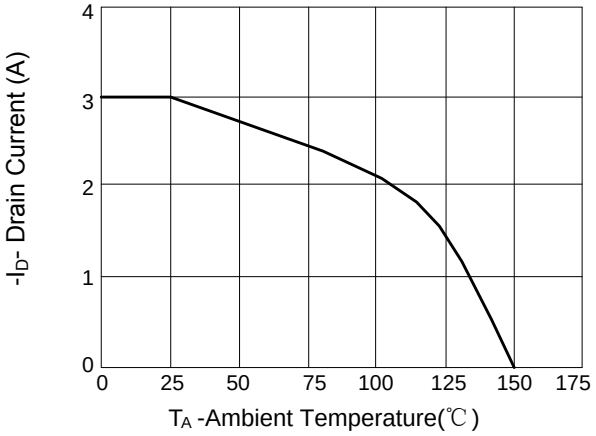
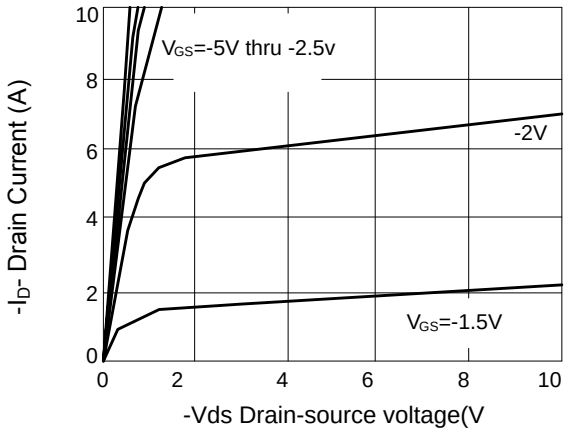


Figure 2: Drain current



)Figure 3: Output characteristics

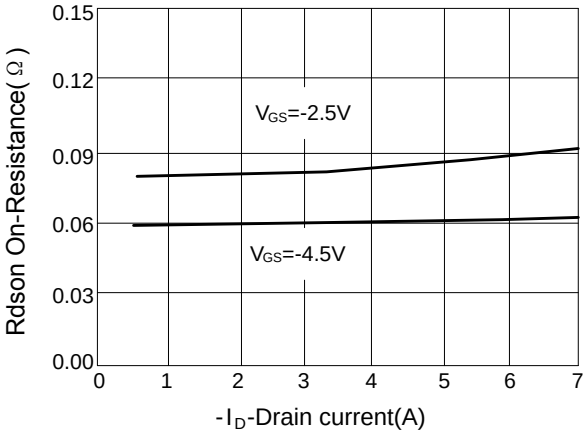


Figure 3: Output characteristics

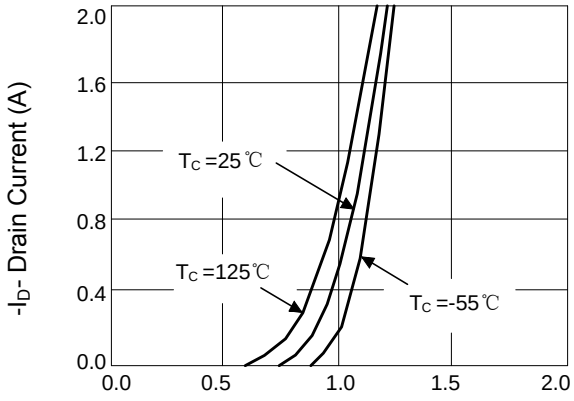


Figure 5: Transfer characteristics

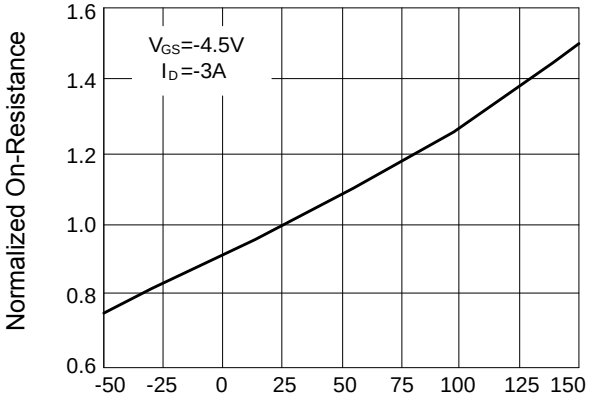


Figure 6: Drain-source on-resistance

■ TYPICAL CHARACTERISTICS(Cont.)

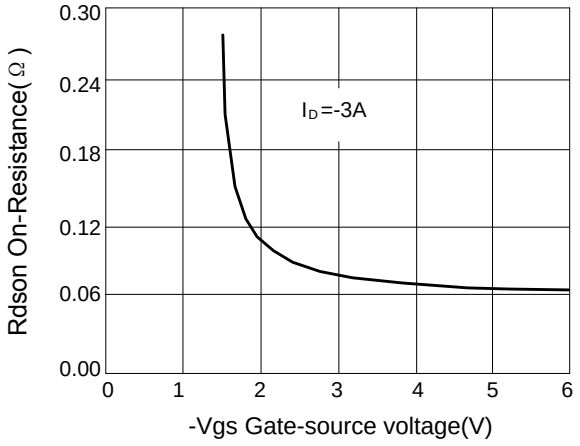


Figure 7: Rdson vs vgs

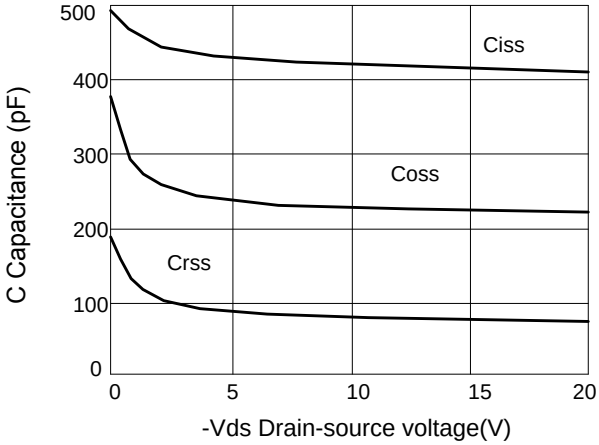


Figure 8: Capacitance vs vds

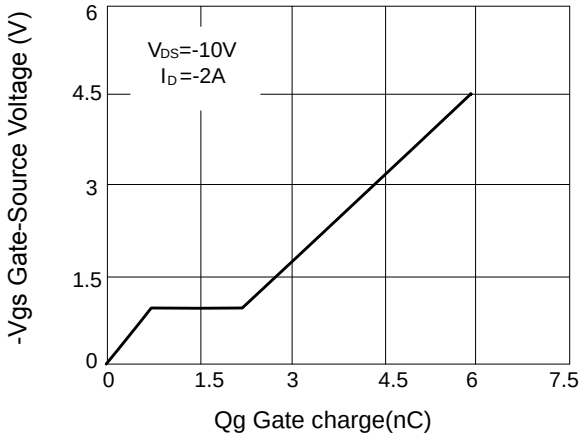


Figure 9: Gate charge

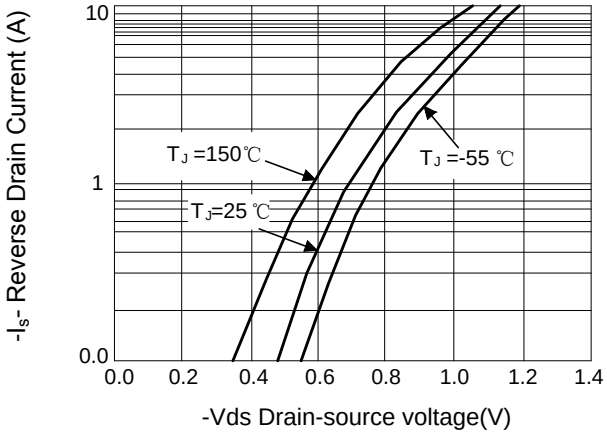


Figure 10: Source-drain diode forward

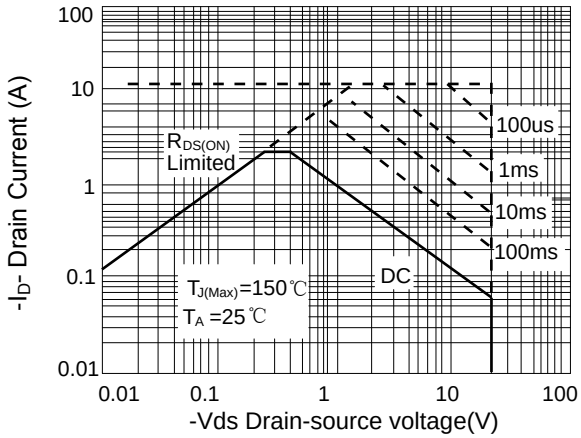
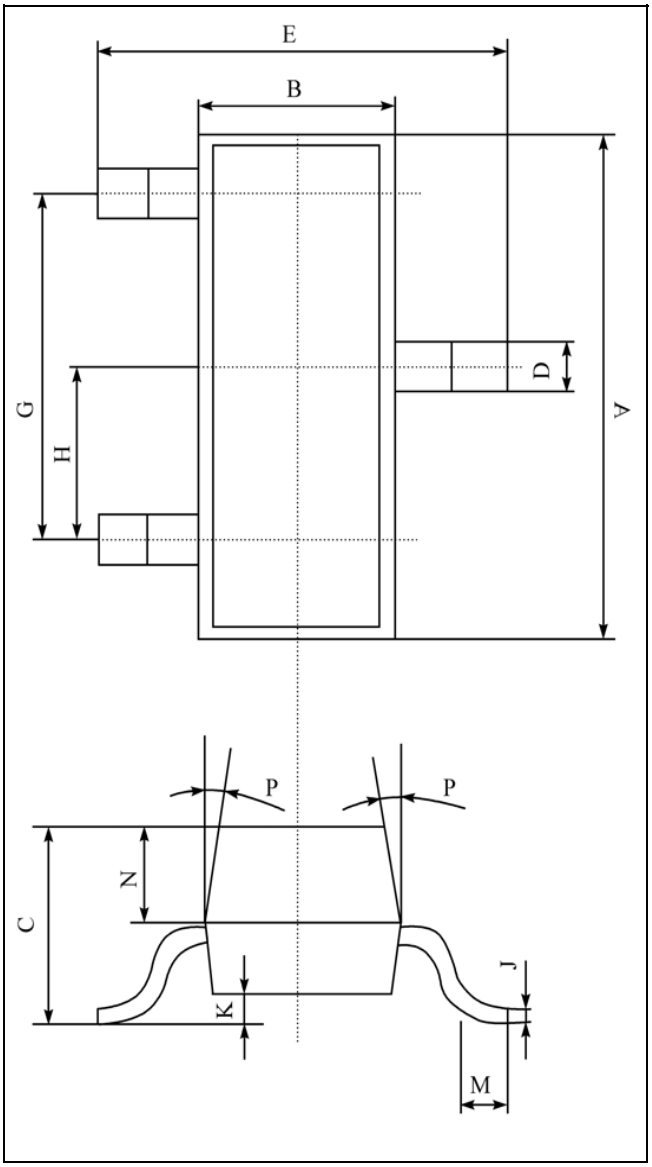


Figure 10: Source-drain diode forward

■SOT-23 PACKAGE OUTLINE DIMENSIONS



单位（UNIT）：mm

序号	数值及公差
A	2.90±0.10
B	1.30±0.10
C	1.00±0.10
D	0.40±0.10
E	2.40±0.20
G	1.90±0.10
H	0.95±0.05
J	0.13±0.05
K	0.00-0.10
M	≥0.20
N	0.60±0.10
P	7±2°

Packing
SOT-23 包装规格
SMD片式表面贴封装
包装方式: 载带卷盘包装
Tape & Reel, 3Kpcs/Reel
每卷数量3000只（3Kpcs/Reel）
每盒数量45000只（45Kpcs/BOX）
每箱数量180000只（180Kpcs/Cartons）