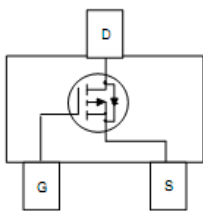
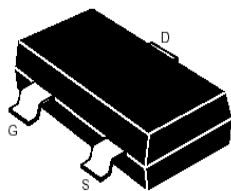


SOT-23

Features

- Advanced trench process technology
- High Density Cell Design For Ultra Low On-Resistance

MAXIMUM RANTINGS

Characteristic	Symbol	Max	Unit
Drain-Source Voltage	BV_{DSS}	-30	V
Gate- Source Voltage	V_{GS}	± 20	V
Drain Current (continuous)	I_D	-4.1	A
Drain Current (pulsed)	I_{DM}	-16	A
Total Device Dissipation $T_A=25^\circ\text{C}$	P_D	1400	mW
Junction	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55to+150	$^\circ\text{C}$

Electrical Characteristics

Characteristic	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage ($I_D = -250\mu\text{A}, V_{GS}=0\text{V}$)	BV_{DSS}	-30	—	—	V
Gate Threshold Voltage ($I_D = -250\mu\text{A}, V_{GS}=V_{DS}$)	$V_{GS(th)}$	-1	—	-2.5	V
Diode Forward Voltage Drop ($I_S = -1\text{ A}, V_{GS}=0\text{V}$)	V_{SD}	—	—	-1	V
Zero Gate Voltage Drain Current ($V_{GS}=0\text{V}, V_{DS}= -24\text{V}$) ($V_{GS}=0\text{V}, V_{DS}= -24\text{V}, T_A=25^\circ\text{C}$)	I_{DSS}	—	—	-1 -5	μA
Gate Body Leakage ($V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$)	I_{GSS}	—	—	± 100	nA
Static Drain-Source On-State Resistance ($I_D = -4.1\text{A}, V_{GS}= -10\text{V}$)	$R_{DS(ON)}$	—	55	65	$\text{m}\Omega$
Static Drain-Source On-State Resistance ($I_D = -2\text{A}, V_{GS}= -4.5\text{V}$)	$R_{DS(ON)}$	—	75	95	$\text{m}\Omega$
Input Capacitance ($V_{GS}=0\text{V}, V_{DS}= -15\text{V}, f=1\text{MHz}$)	C_{ISS}	—	260	—	pF
Output Capacitance ($V_{GS}=0\text{V}, V_{DS}= -15\text{V}, f=1\text{MHz}$)	C_{OSS}	—	37	—	pF
Turn-ON Time ($V_{DS}= -15\text{V}, I_D = -10\text{ A}, R_{GEN}=6\Omega$)	$t_{(on)}$	—	6	—	ns
Turn-OFF Time ($V_{DS}= -15\text{V}, I_D = -10\text{ A}, R_{GEN}=6\Omega$)	$t_{(off)}$	—	20	—	ns

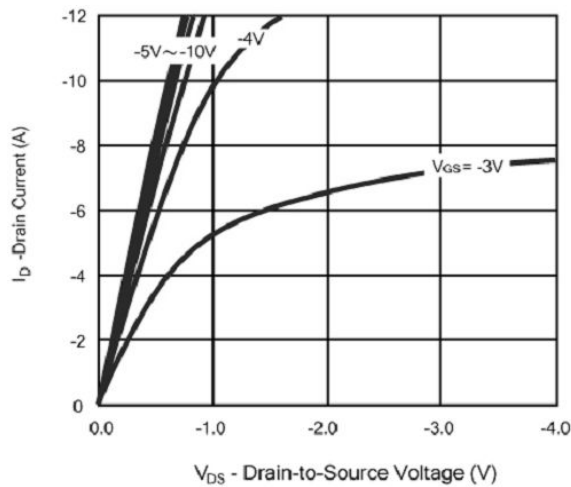


Figure 1: Output Characteristics

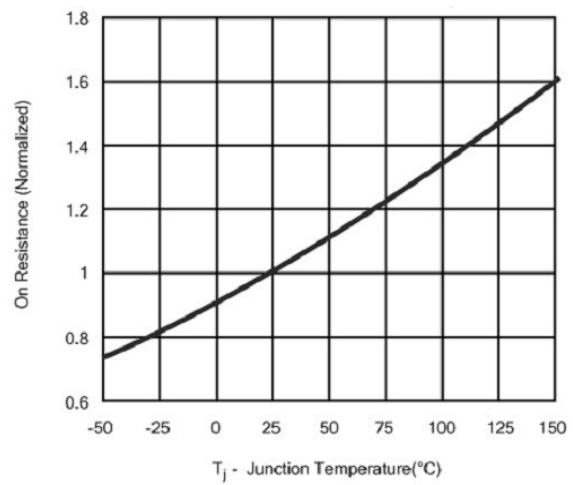


Figure 2: On-Resistance vs. Junction Temperature

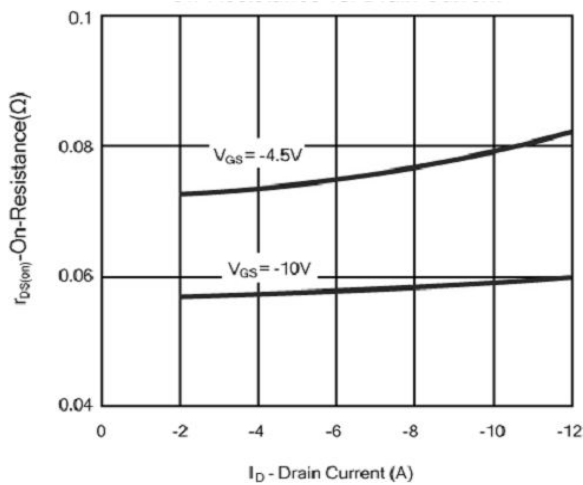


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

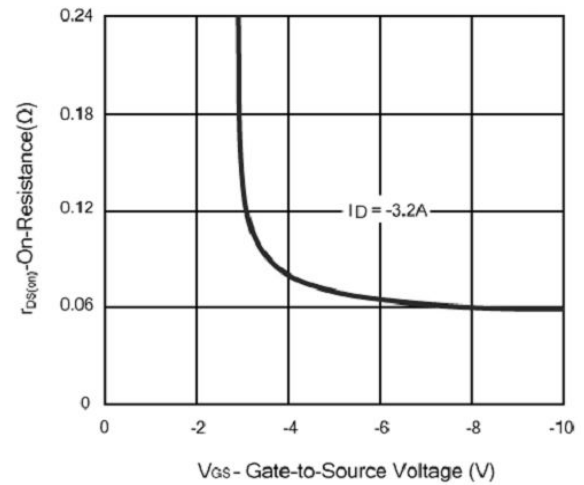


Figure 4: On-Resistance vs. Gate-Source Voltage

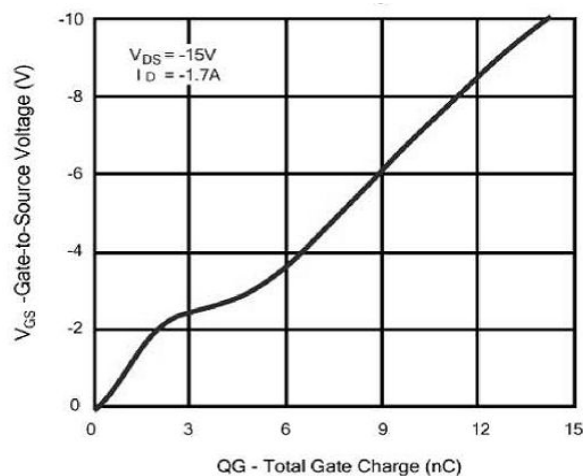


Figure 5: Gate-Charge Characteristics

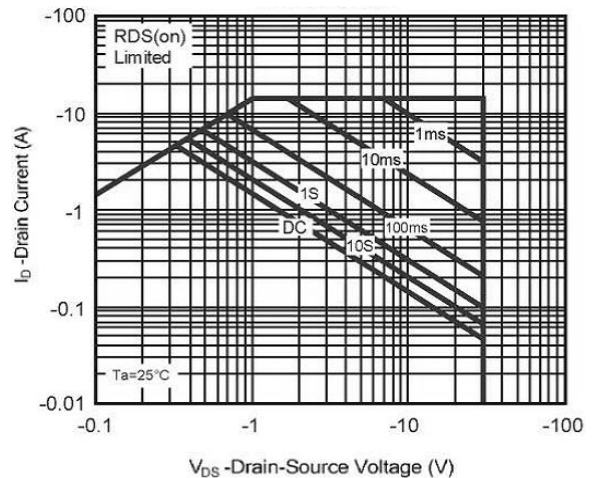
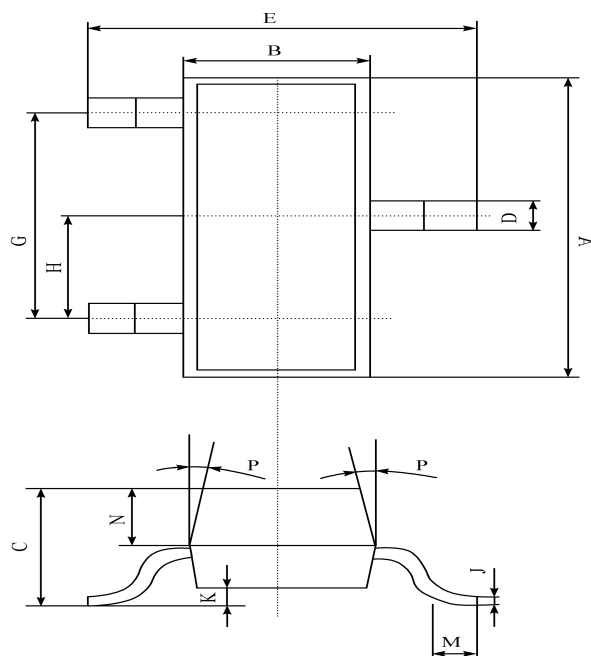


Figure 6: Safe Operating Area



SOT-23 PACKAGE OUTLINE Plastic surface mounted package



SOT-23	
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	≥ 0.2
N	0.60 ± 0.10
P	$7 \pm 2^\circ$

(UNIT): mm