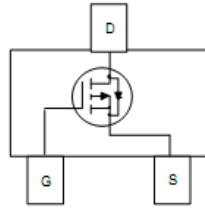
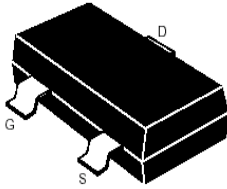


**SOT-23**

**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	$V_{GS}$	$\pm 12$	V
Drain Current (continuous)	$I_D$	-4.2	A
Drain Current (pulsed)	$I_{DM}$	-18	A
Total Device Dissipation $T_A=25^\circ C$	$P_D$	1400	mW
Junction	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55to+150	$^\circ C$

**Electrical Characteristics**

Characteristic	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage ( $I_D = -250\mu A, V_{GS}=0V$ )	$BV_{DSS}$	-30	—	—	V
Gate Threshold Voltage ( $I_D = -250\mu A, V_{GS}= V_{DS}$ )	$V_{GS(th)}$	-0.6	—	-2	V
Diode Forward Voltage Drop ( $I_S = -1 A, V_{GS}=0V$ )	$V_{SD}$	—	—	-1	V
Zero Gate Voltage Drain Current ( $V_{GS}=0V, V_{DS}= -24V$ ) ( $V_{GS}=0V, V_{DS}= -24V, T_A=55^\circ C$ )	$I_{DSS}$	—	—	-1 -5	$\mu A$
Gate Body Leakage ( $V_{GS}=\pm 12V, V_{DS}=0V$ )	$I_{GSS}$	—	—	$\pm 100$	nA
Static Drain-Source On-State Resistance ( $I_D= -4.1A, V_{GS}= -10V$ )	$R_{DS(ON)}$	—	42	50	$m\Omega$
Static Drain-Source On-State Resistance ( $I_D= -2A, V_{GS}= -4.5V$ )	$R_{DS(ON)}$	—	53	60	$m\Omega$
Static Drain-Source On-State Resistance ( $I_D= -1A, V_{GS}= -2.5V$ )	$R_{DS(ON)}$	—	80	85	$m\Omega$
Input Capacitance ( $V_{GS}=0V, V_{DS}= -15V, f=1MHz$ )	$C_{ISS}$	—	954	—	pF
Output Capacitance ( $V_{GS}=0V, V_{DS}= -15V, f=1MHz$ )	$C_{OSS}$	—	115	—	pF
Turn-ON Time ( $V_{DS}= -15V, V_{GS}=-10 V, R_{GEN}=6\Omega$ )	$t_{(on)}$	—	6	—	ns
Turn-OFF Time ( $V_{DS}= -15V, V_{GS}=-10 V, R_{GEN}=6\Omega$ )	$t_{(off)}$	—	38	—	ns

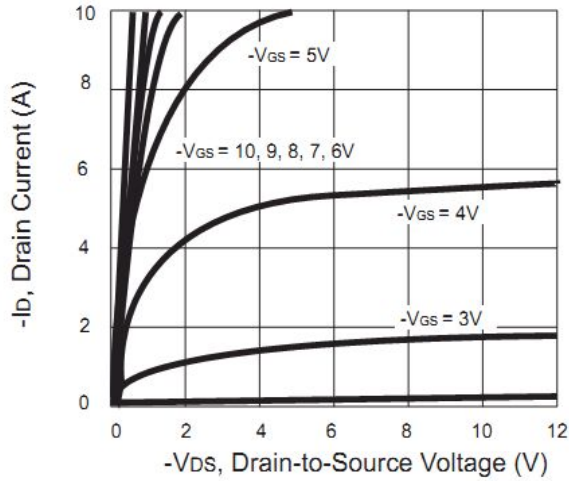


Fig 1: Output Characteristics

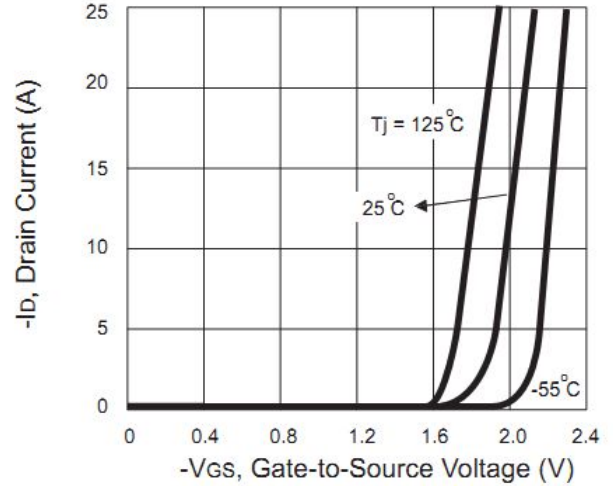


Figure 2: Transfer Characteristics

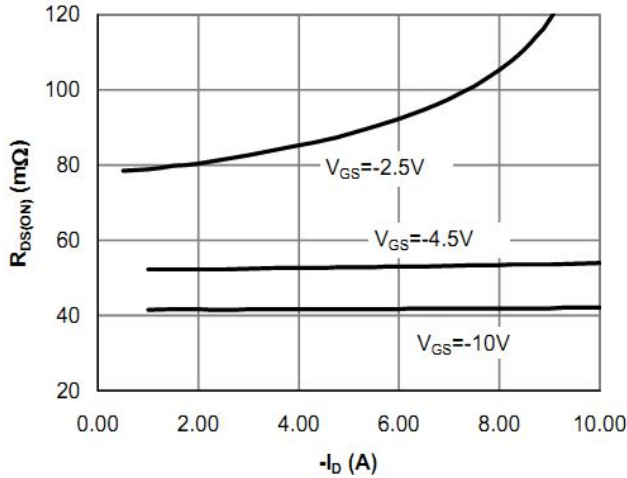


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

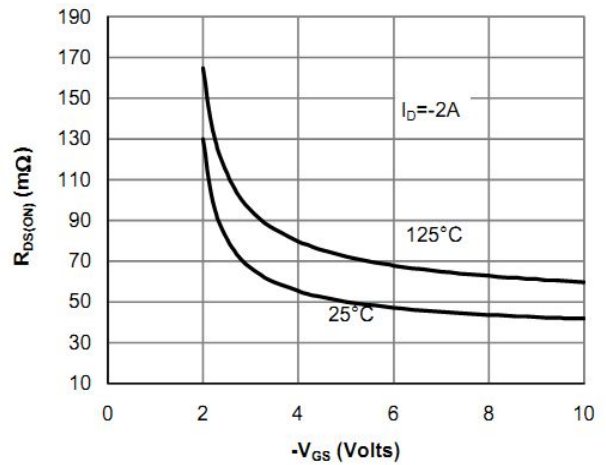


Figure 4: On-Resistance vs. Gate-Source Voltage

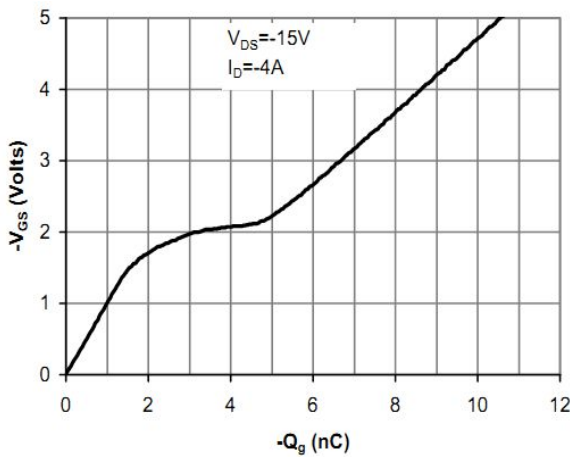


Figure 5: Gate-Charge Characteristics

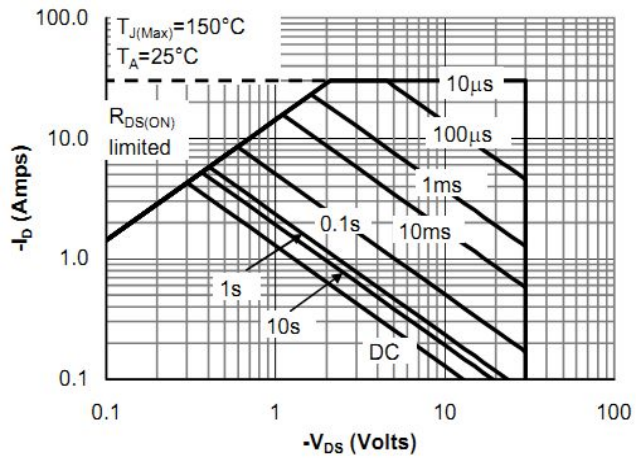
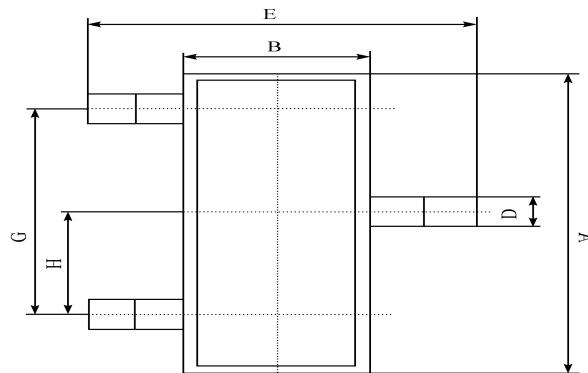


Figure 6: Safe Operating Area

**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 ± 2°

(UNIT): mm

