

Features

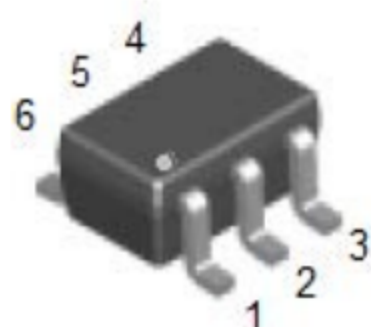
- Low on-resistance
- Low gate threshold voltage
- Low input capacitance
- Fast switching speed
- Halogen free

Mechanical Data

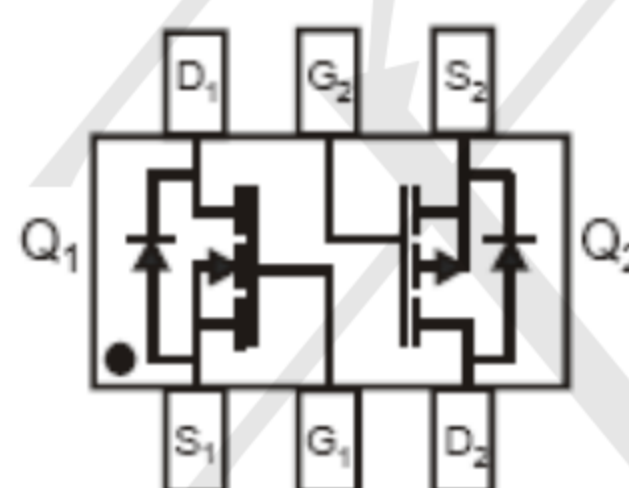
- Case: SOT-363
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

- Shipping Qty:3000/7inch Tape& Reel



SOT363



Marking:402

Maximum Ratings –Total Device (T_A=25°C unless otherwise noted)

Symbol	TECHPUBLIC Parameter	Value	Units
P _D	Power Dissipation	200	mW
R _{θJA}	Thermal resistance,Junction-to-Ambient	625	°C/W
T _J , T _{STG}	Junction and Storage Temperature	-55 to +150	°C

Maximum Ratings (T_A=25°C unless otherwise noted)

Q1-N-MOSFET

Symbol	TECHPUBLIC Parameter	Value	Units
V _{DSS}	Drain-Source voltage	60	V
V _{DGR}	Drain-Gate voltage(R _{GS} ≤1.0MΩ)	60	V
V _{GSS}	Gate -Source voltage continuous Pulsed	± 20 ± 40	V
I _D	Drain current continuous continuous@100°C Pulsed	115 73 800	mA

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Q2-P-MOSFET

Symbol	Parameter	Value	Units
V_{DSS}	Drain-Source voltage	-50	V
V_{DGR}	Drain-Gate voltage($R_{GS}\leq 1.0\text{M}\Omega$)	-50	V
V_{GSS}	Gate -Source voltage continuous	± 20	V
I_D	Drain current continuous	-130	mA

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Q1-N-MOSFET

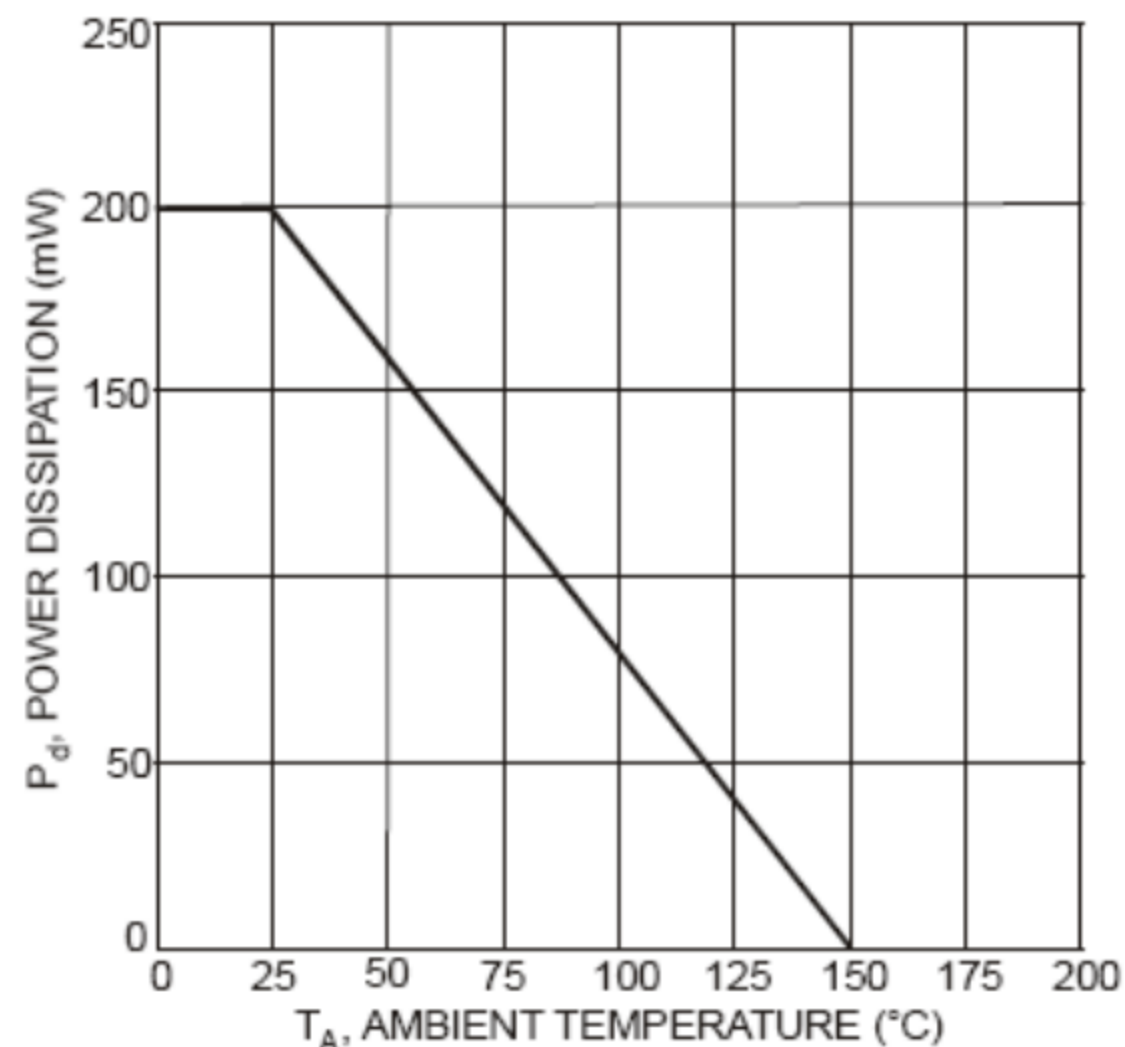
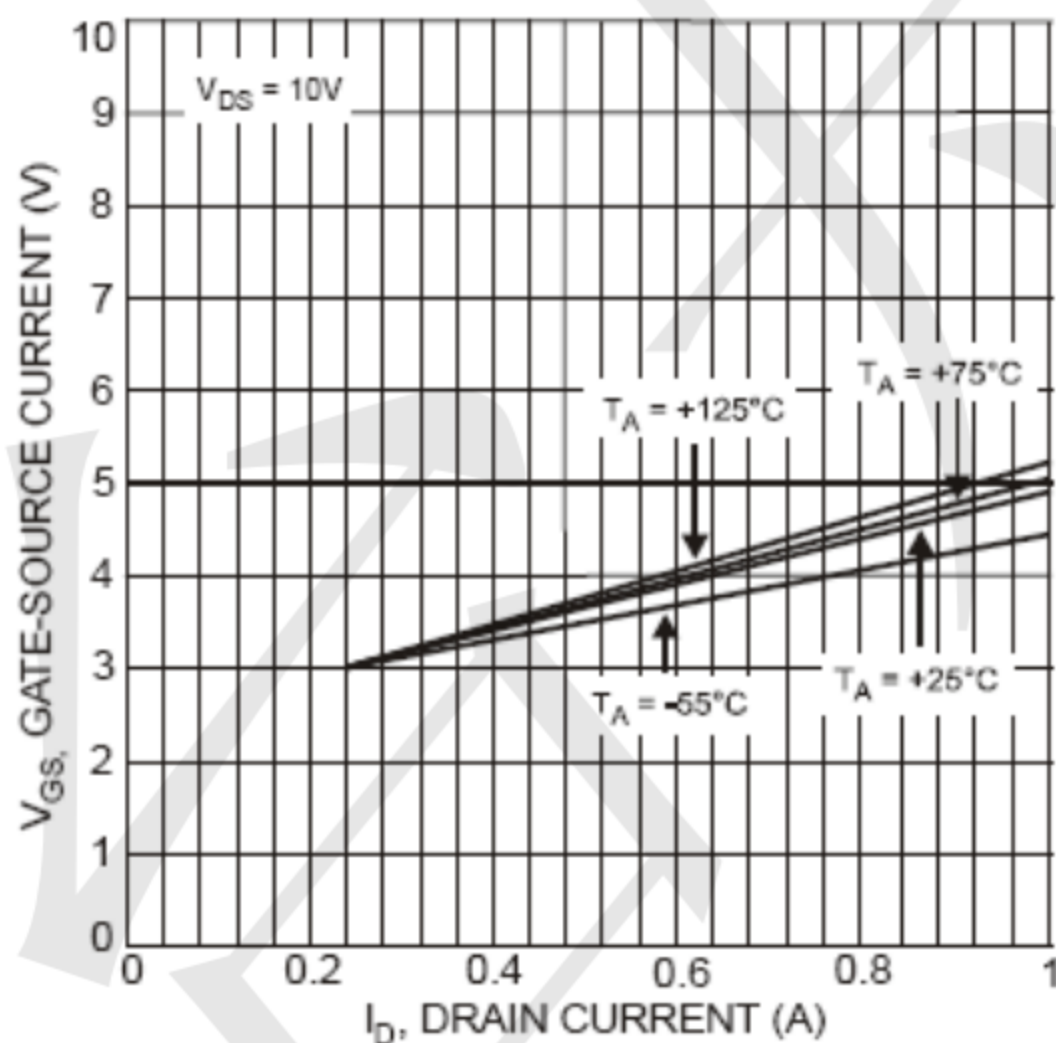
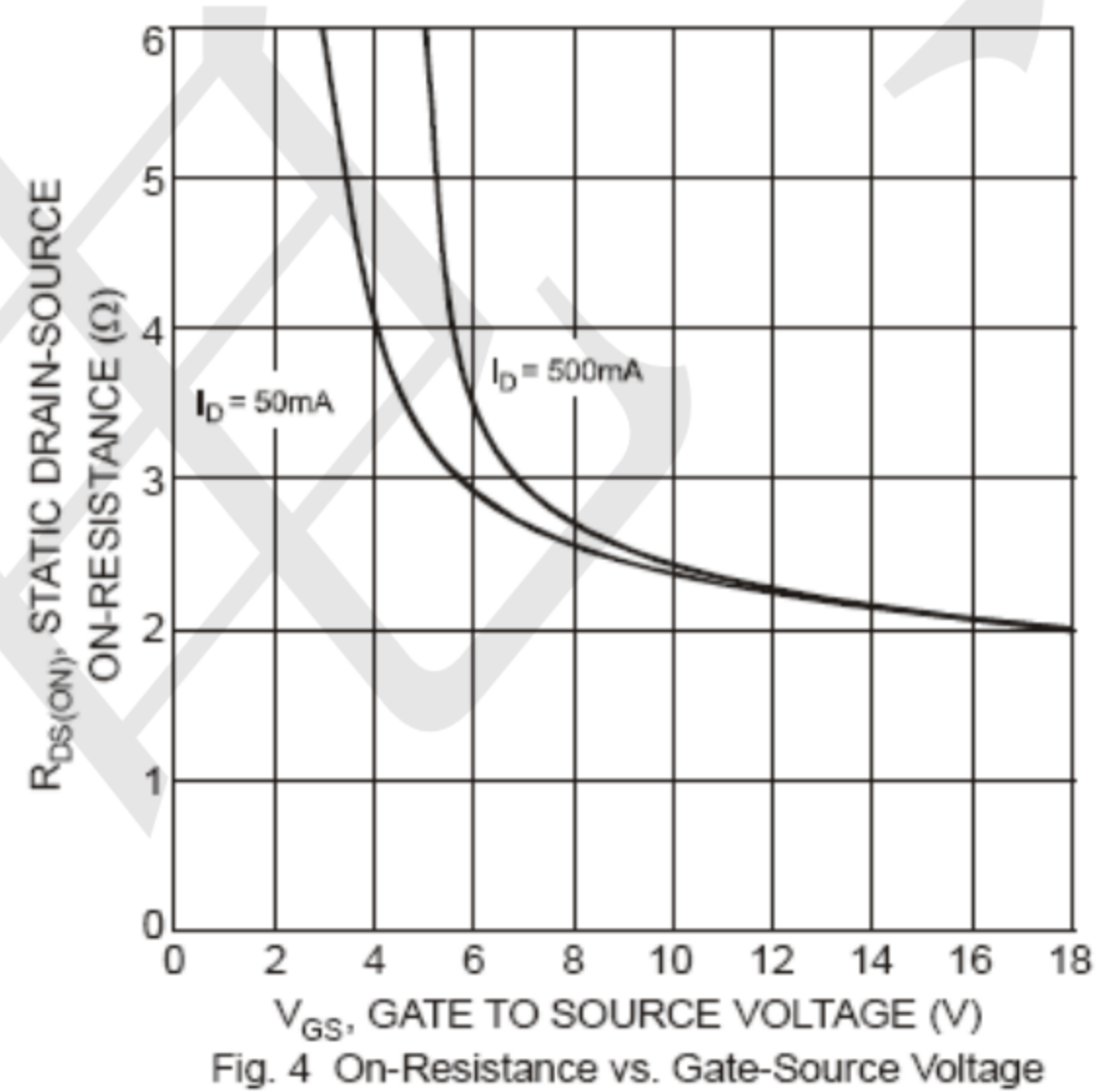
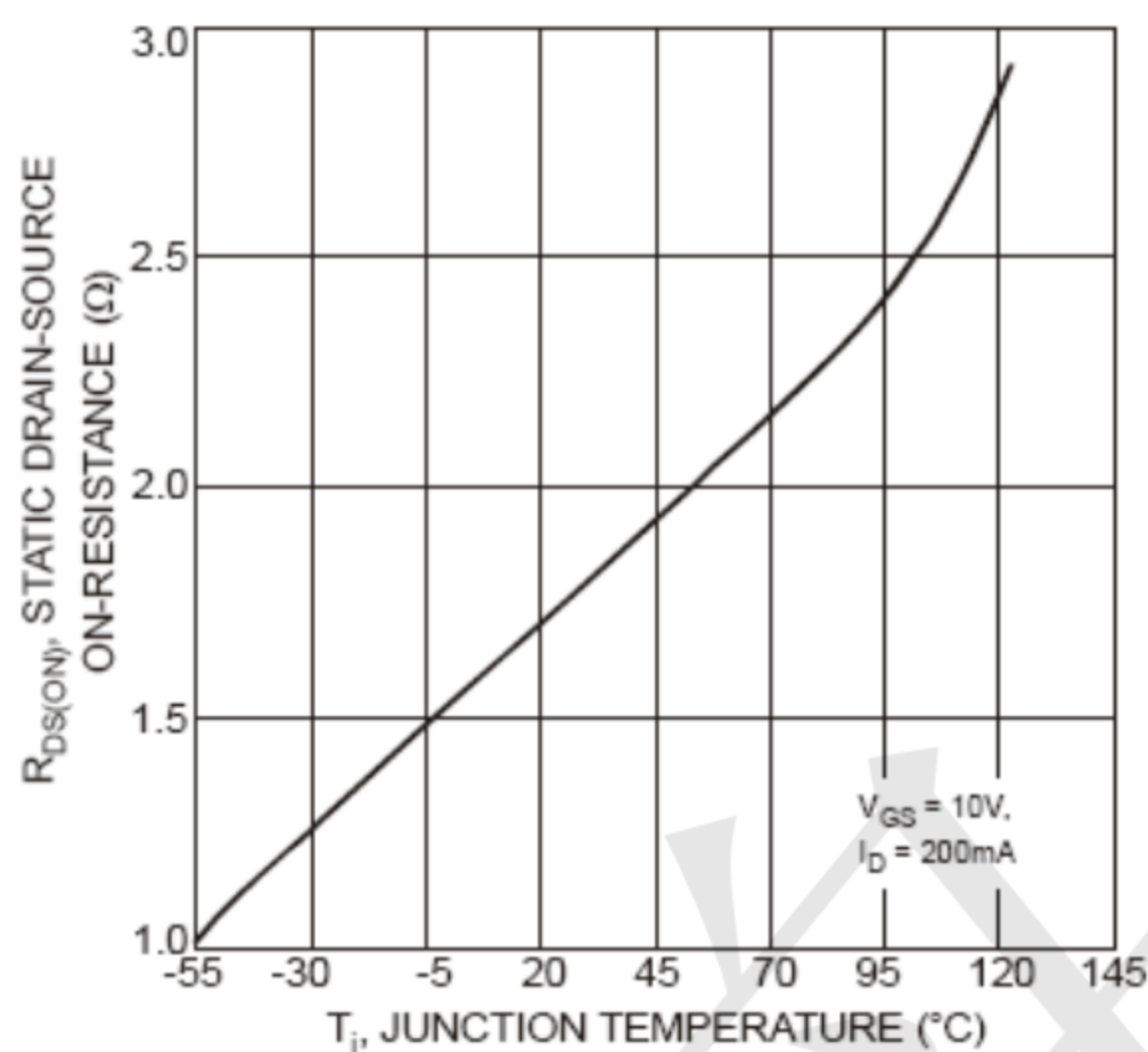
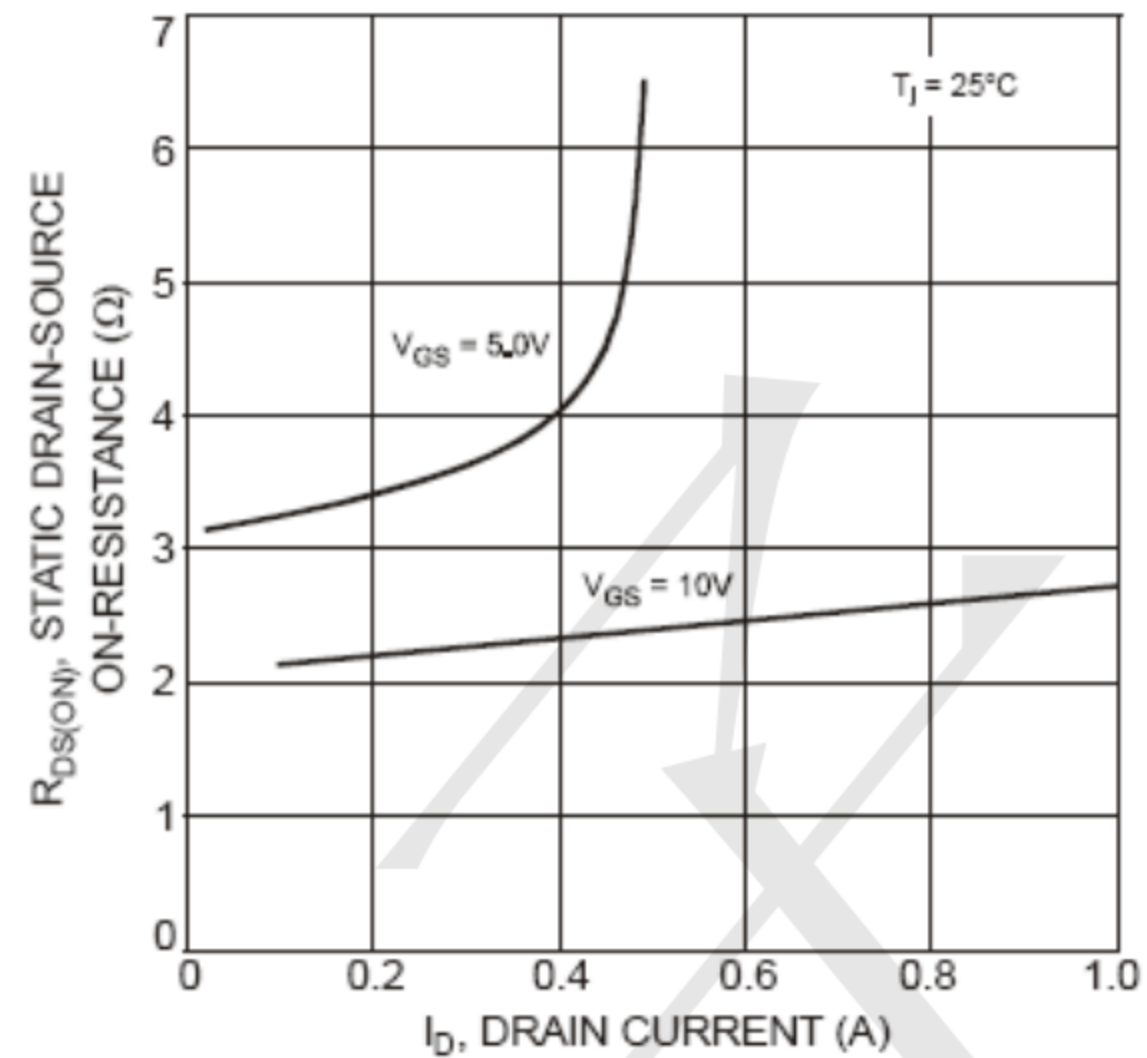
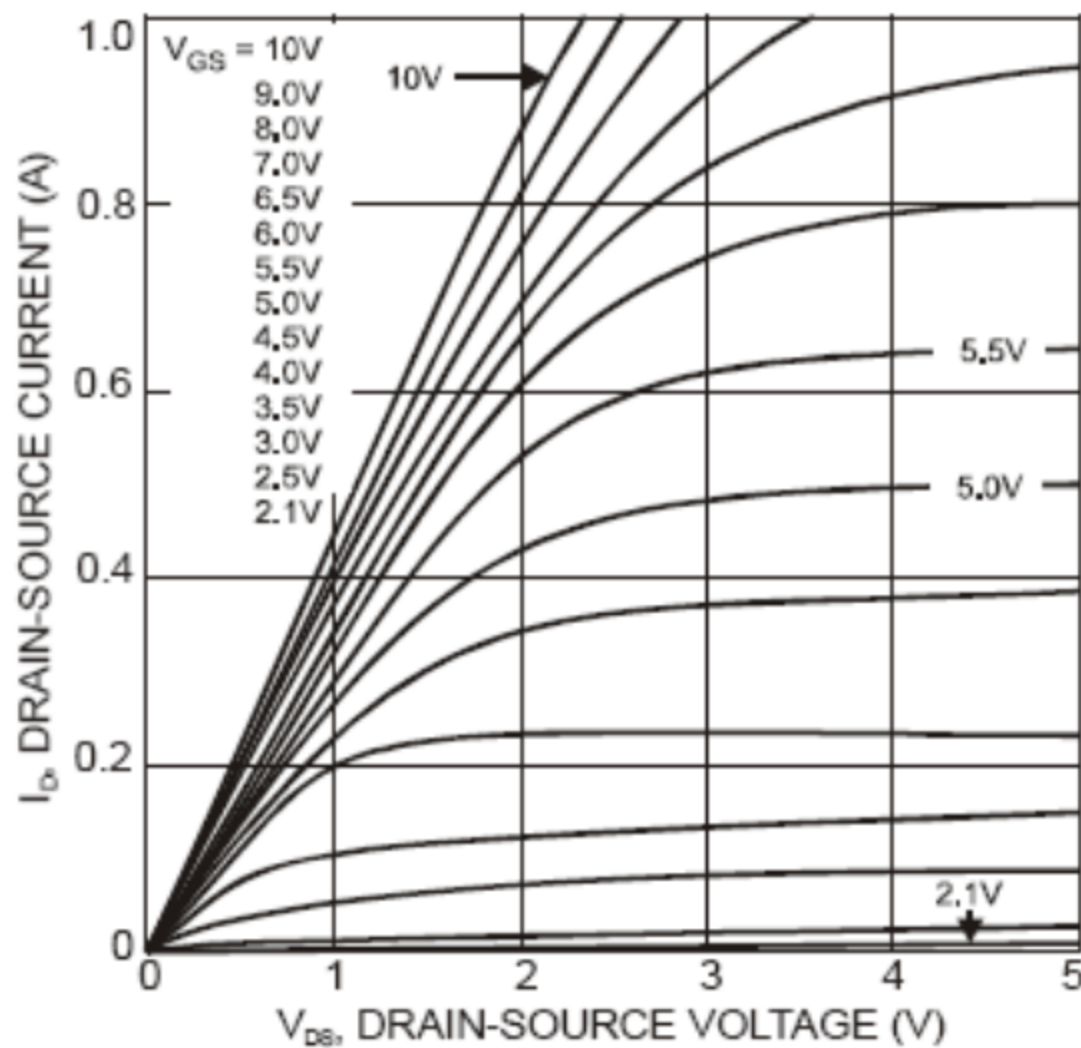
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0\text{V}, I_D=10\mu\text{A}$	60		-	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1	-	2.5	
Gate-body Leakage	I_{GSS}	$V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$	-	-	± 1	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60\text{V}, V_{GS}=0\text{V}$	-	-	1	μA
		$V_{DS}=60\text{V}, V_{GS}=0\text{V}, T_j=125^\circ\text{C}$	-	-	500	
On-state Drain Current	$I_{D(on)}$	$V_{GS}=10\text{V}, V_{DS}=7.5\text{V}$	0.5	1.0	-	A
Drain-Source on-voltage	$V_{DS(on)}$	$V_{GS}=10\text{V}, I_D=500\text{mA}$	-	0.6	3.75	V
		$V_{GS}=5\text{V}, I_D=50\text{mA}$	-	0.09	1.5	
Forward transconductance	g_{FS}	$V_{DS}=10\text{V}, I_D=200\text{mA}$	80	-	-	mS
Static drain-Source on-resistance	$R_{DS(on)}$	$V_{GS}=5.0\text{V}, I_D=50\text{mA}$	-	3.2	7.5	Ω
		$V_{GS}=10\text{V}, I_D=500\text{mA}, T_j=125^\circ\text{C}$	-	4.4	13.5	
Input capacitance	C_{ISS}	$V_{DS}=25\text{V}, V_{GS}=0\text{V}, f=1.0\text{MHz}$	-	22	50	pF
Output capacitance	C_{OSS}		-	11	25	
Reverse transfer capacitance	C_{RSS}		-	2	5	
Turn-On Delay Time	$t_{D(on)}$	$V_{DD} = 30\text{V}, I_D = 0.2\text{A},$ $R_L = 150\Omega, V_{GS} = 10\text{V},$	-	7	20	ns
Turn-Off Delay Time	$t_{D(off)}$	$R_{GEN} = 25\Omega$	-	11	20	ns

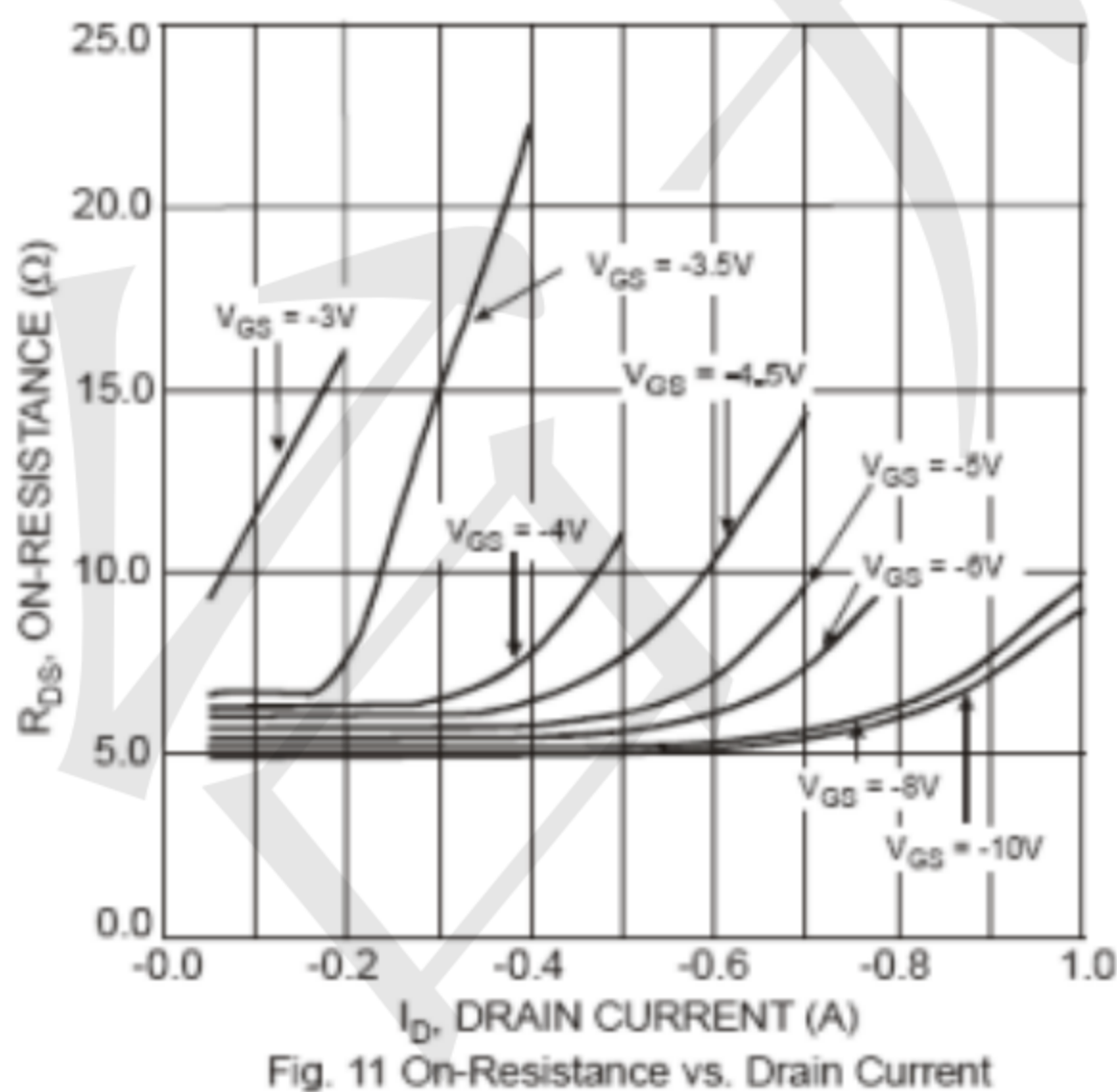
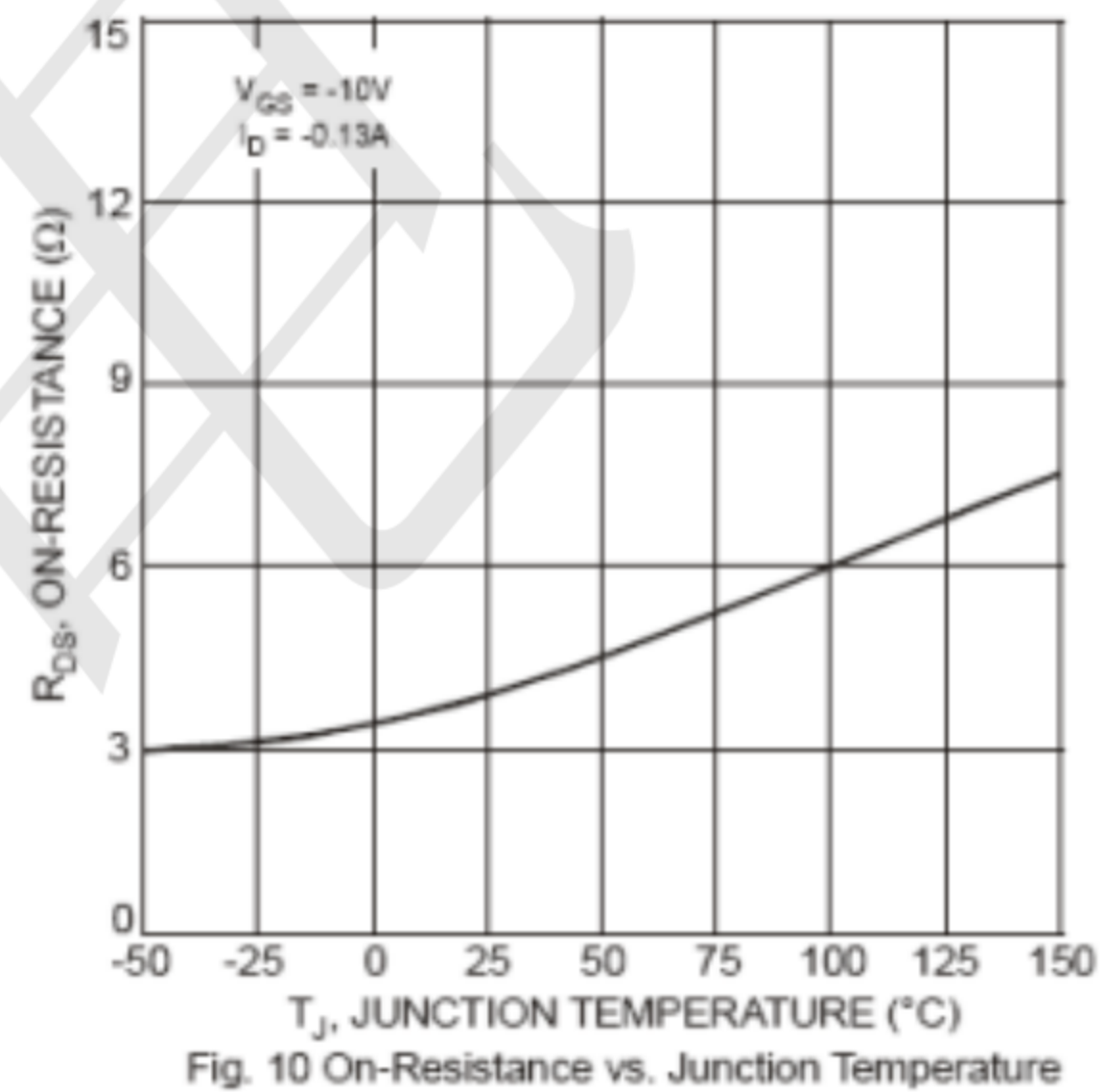
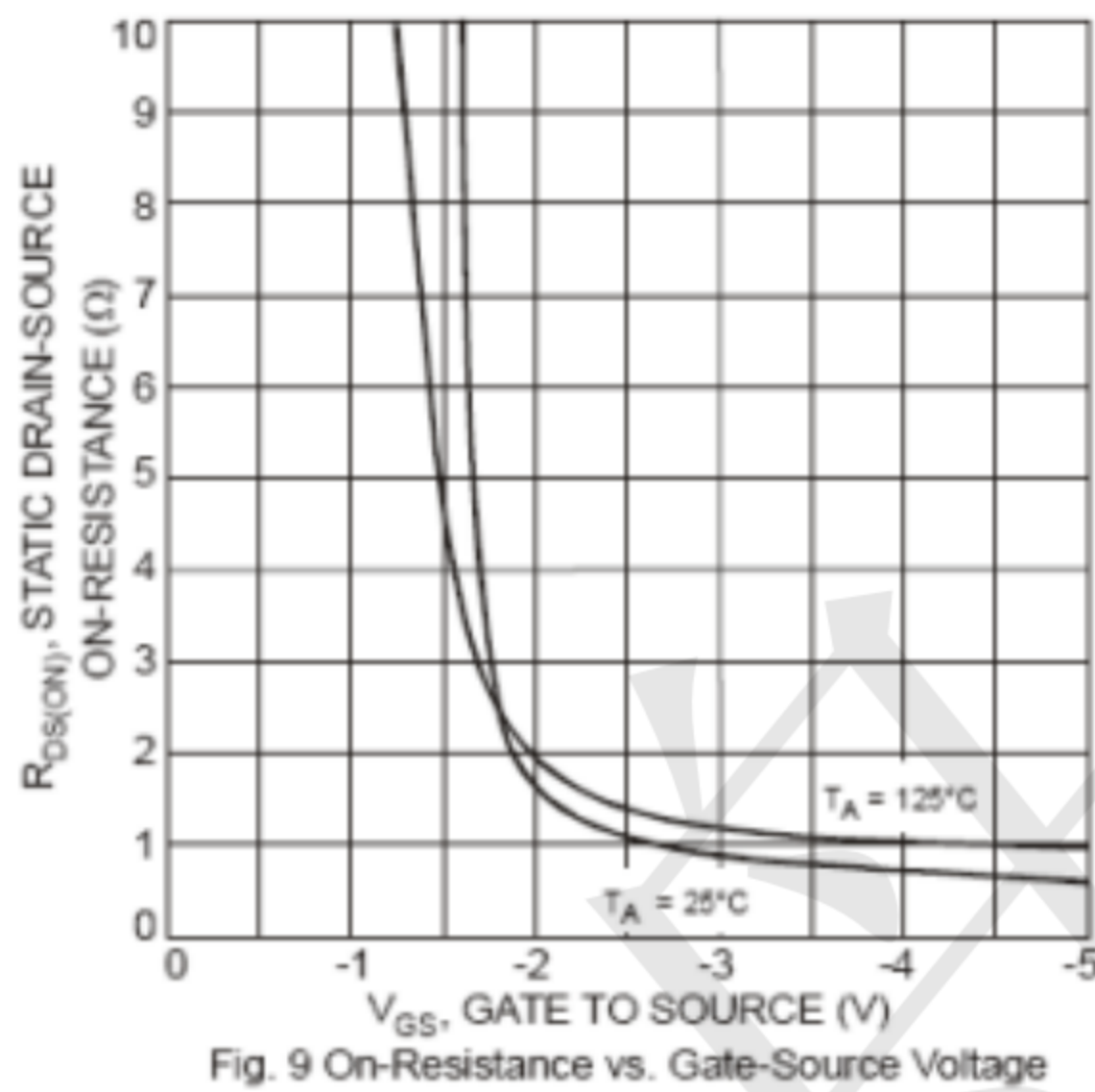
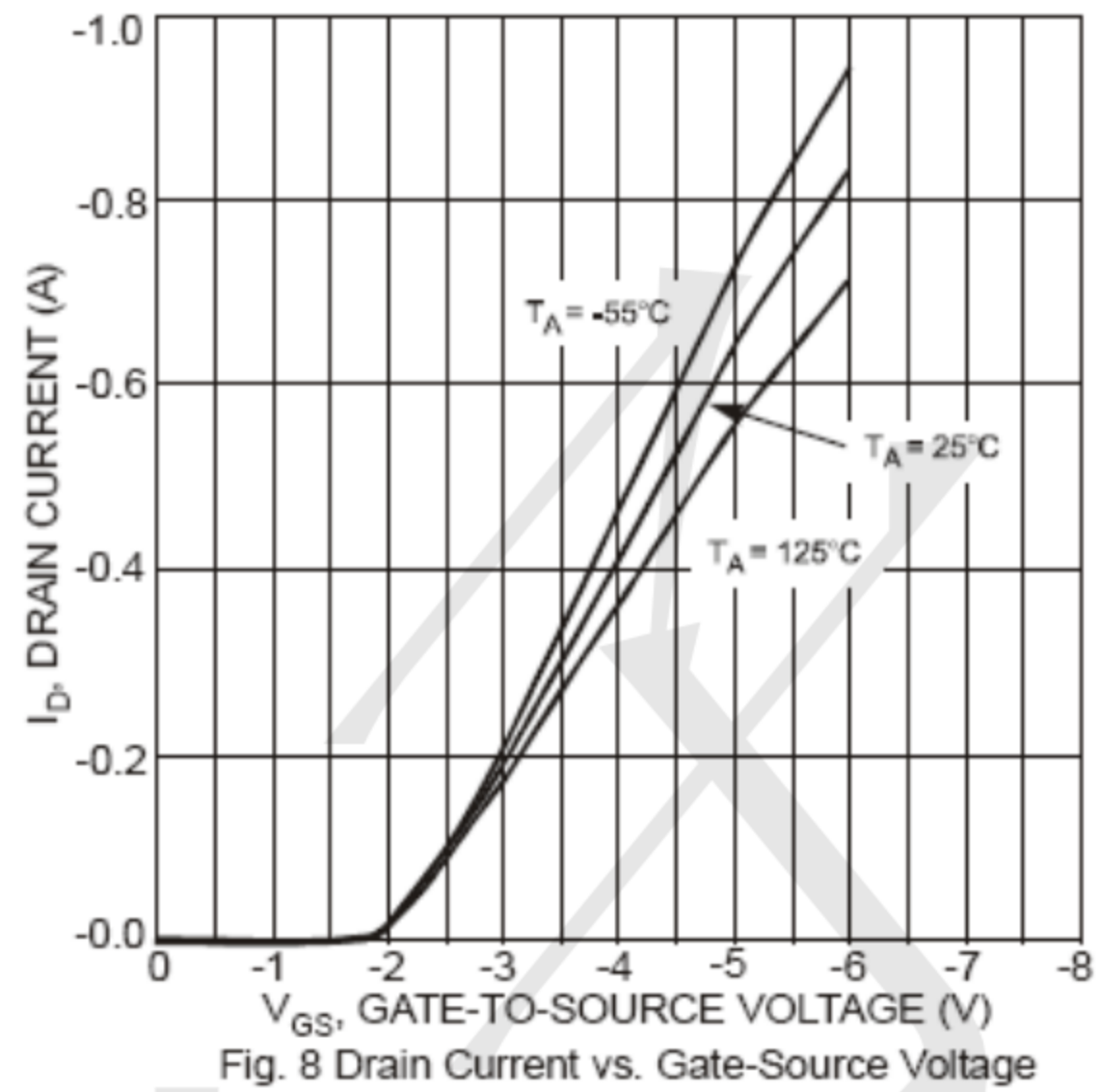
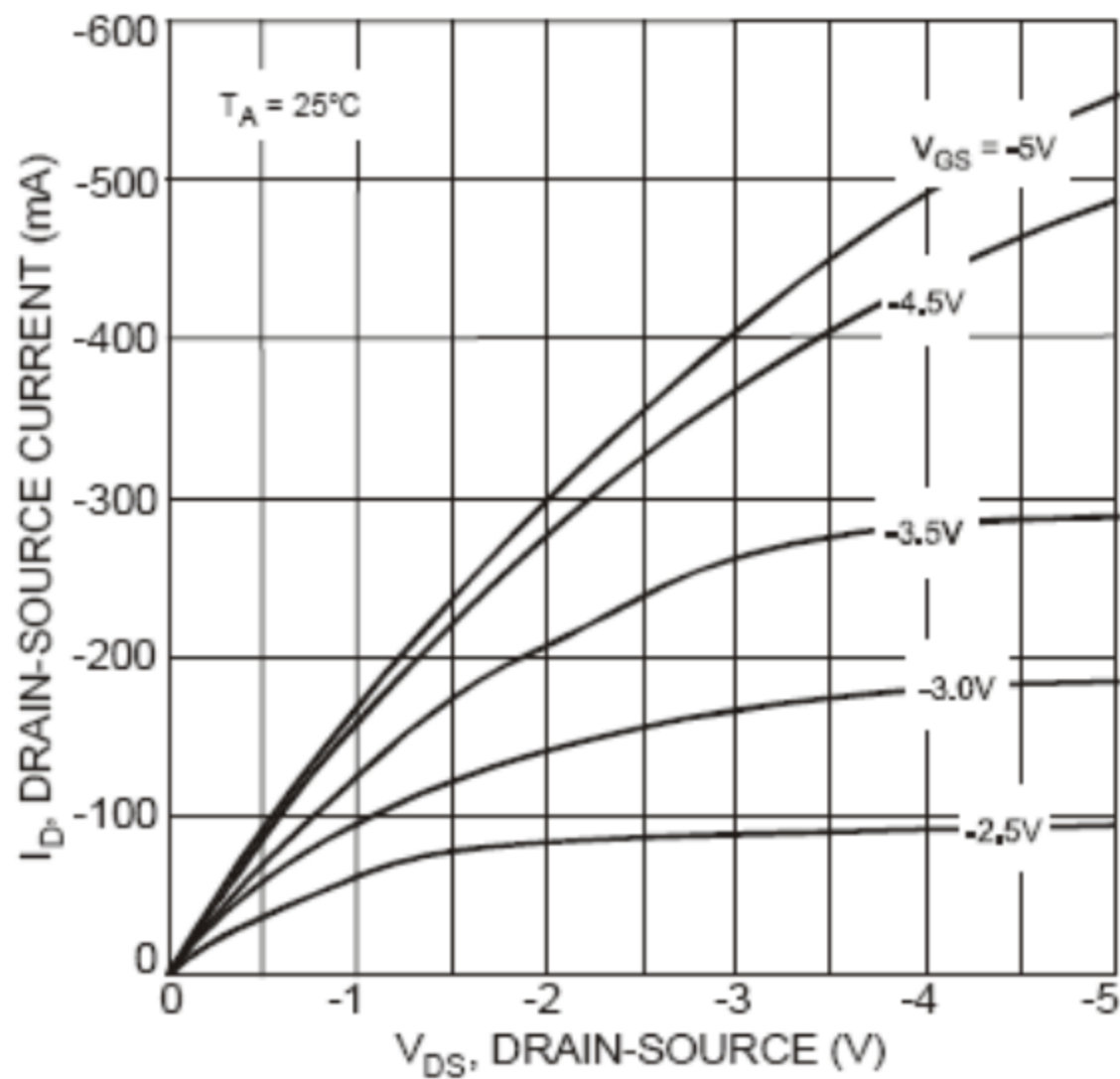
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Q2-N-MOSFET

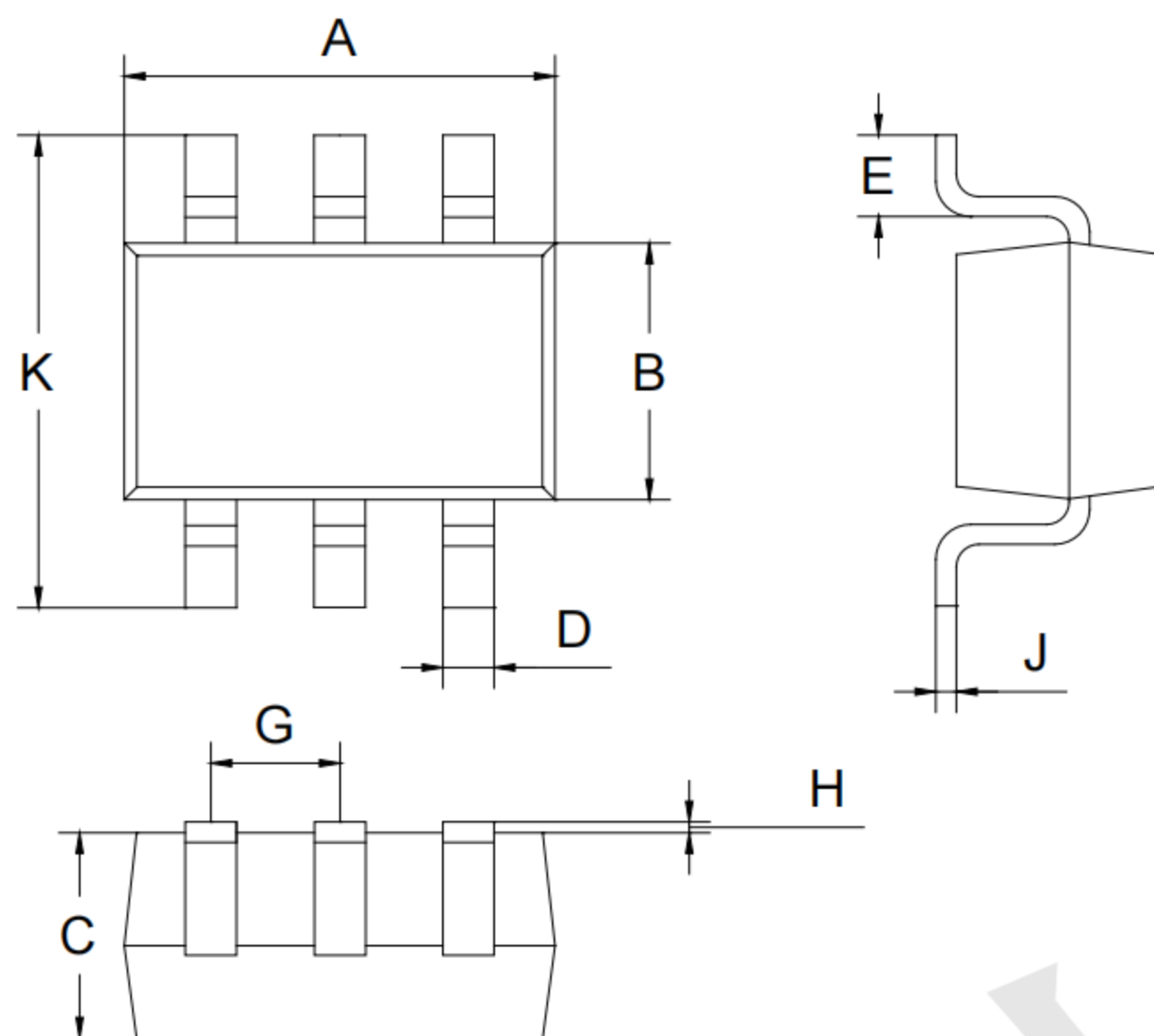
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-50	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-1mA$	-0.8	-	-2	
Gate-body Leakage Forward Reverse	I_{GSS}	$V_{DS}=0V, V_{GS}=20V$ $V_{DS}=0V, V_{GS}=-20V$	- -	- -	100 -100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-50V, V_{GS}=0V, T_j=25^\circ\text{C}$	-	-	-15	uA
		$V_{DS}=-50V, V_{GS}=0V, T_j=125^\circ\text{C}$	-	-	-60	
		$V_{DS}=-25V, V_{GS}=0V, T_j=25^\circ\text{C}$	-	-	-100	nA
Forward transconductance	g_{FS}	$V_{DS}=-25V, I_D=-0.1A$	0.05	-	-	S
Static drain-Source on-resistance	$R_{DS(ON)}$	$V_{GS}=-5V, I_D=-0.1A$	-	-	10	Ω
On-state drain current	$I_{D(ON)}$	$V_{GS}=10V, V_{DS}=7.5V$	0.5	1.0	-	A
Input capacitance	C_{ISS}	$V_{DS}=-25V, V_{GS}=0V, f=1.0MHz$	-	-	45	pF
Output capacitance	C_{OSS}		-	-	25	
Reverse transfer capacitance	C_{RSS}		-	-	12	
Turn-On Delay Time	$t_{D(ON)}$	$V_{DD}=-30V, I_D=-0.27A,$ $V_{GS}=-10V, R_{GEN}=50\Omega$	-	10	-	ns
Turn-Off Delay Time	$t_{D(OFF)}$		-	18	-	ns

Typical Electrical Characteristic Curves





Outline Drawing - SOT363 (unit: mm)



SOT-363		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.85	1.05
D	0.15	0.35
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout-SOT363 (unit: mm)

