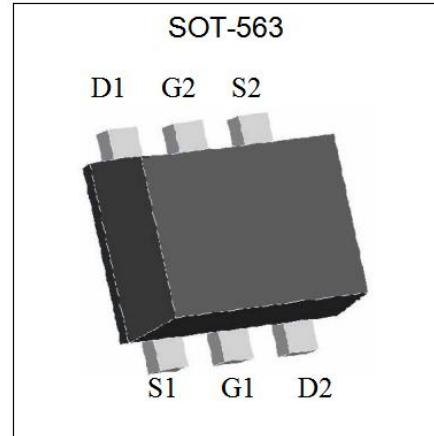
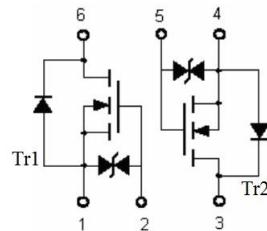


N-Channel Enhancement Mode Field Effect Transistor

Features

- High speed switching
- Low-voltage drive(1.5V)
- Easily designed drive circuits
- Easy to use in parallel
- Pb-free package

MARKING: KL



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	± 8	V
Continuous Drain Current @ $V_{GS}=4.5\text{V}$, $T_A=25^\circ\text{C}$	I_D	0.3	A
Continuous Drain Current @ $V_{GS}=4.5\text{V}$, $T_A=85^\circ\text{C}$		0.22	
Pulsed Drain Current	I_{DM}	1.6 (Note 1)	
Power Dissipation	P_d	150 (Note 2)	mW
Operating Junction Temperature Range	T_j	-55~+150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~+150	$^\circ\text{C}$

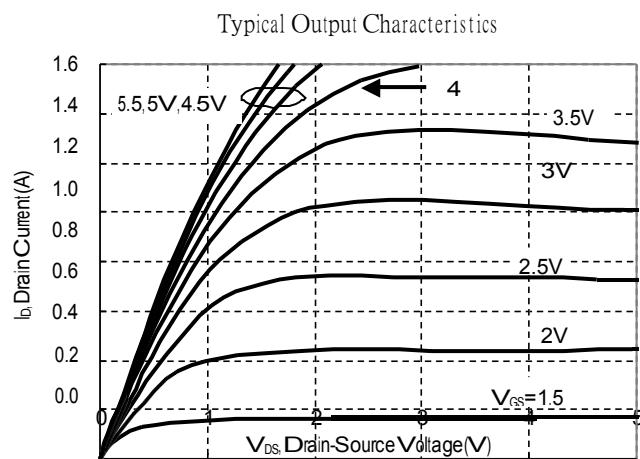
Note : 1. Pulse test, pulse width $\leq 300\mu\text{s}$, duty $\leq 2\%$

2. 120mW per element must not be exceeded.

Characteristics at $T_a = 25^\circ\text{C}$

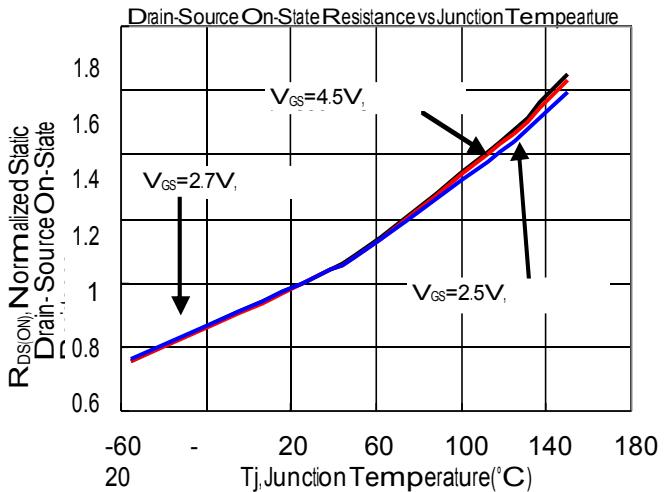
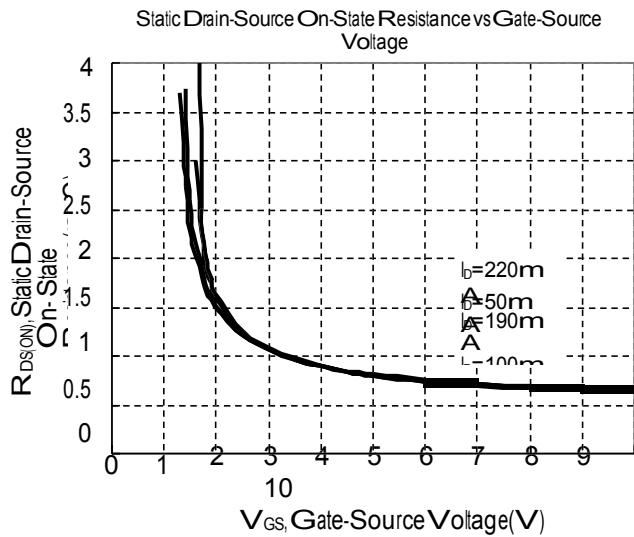
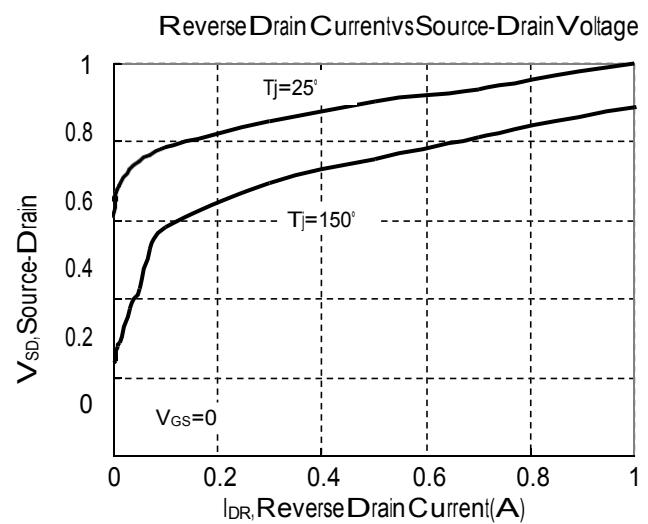
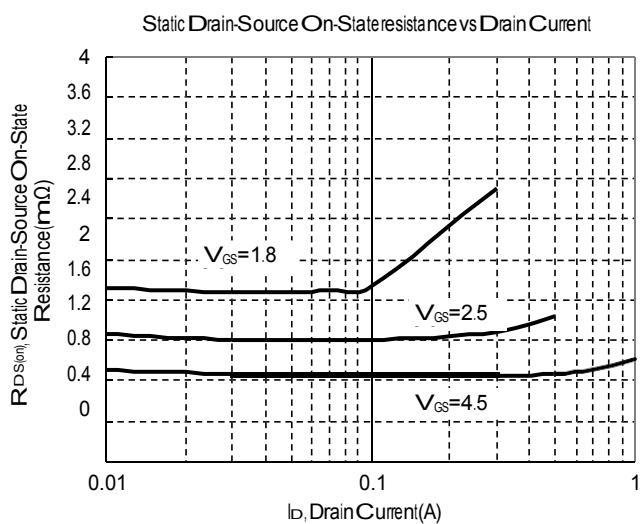
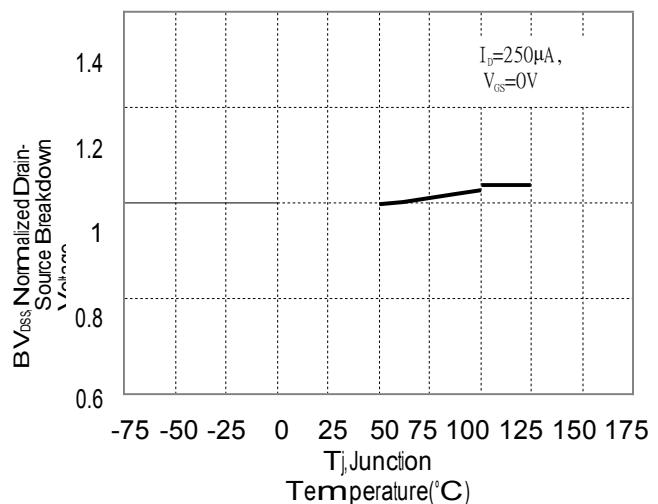
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Static					
BV _{DSS*}	30	-	-	V	V _{GS} =0, I _D =10μA
V _{GS(th)}	0.5	0.78	1.1	V	V _{DS} =V _{GS} , I _D =250μA
I _{GSS}	-	-	±1	μA	V _{GS} =±8V, V _{DS} =0
I _{DSS}	-	-	100	nA	V _{DS} =30V, V _{GS} =0
R _{DSON} *	-	0.85	1.5	Ω	V _{GS} =4.5V, I _D =200mA
	-	1.23	3		V _{GS} =2.5V, I _D =175mA
	-	1.8	4		V _{GS} =1.8V, I _D =150mA
	-	2.3	5		V _{GS} =1.5V, I _D =40mA
G _{FS}	-	460	-	mS	V _{DS} =10V, I _D =200mA
Dynamic					
C _{iss}	-	33.5	-	pF	V _{DS} =15V, V _{GS} =0, f=1MHz
C _{oss}	-	6.1	-		
C _{rss}	-	2.5	-		
Q _g	-	495	-	pC	V _{DS} =15V, I _D =300mA, V _{GS} =4.5V
Q _{gs}	-	49	-		
Q _{gd}	-	175	-		
t _{d(on)}	-	-	50	ns	V _{DD} =15V, I _D =200mA, V _{GS} =4.5V, R _G =10Ω
t _r	-	-	25		
t _{d(off)}	-	-	50		
t _f	-	-	25		
Source-Drain Diode					
I _S	-	-	0.3	A	Is=150mA, V _{GS} =0V
I _{SM}	-	-	2		
V _{SD}	-	0.81	1	V	

Typical Characteristics

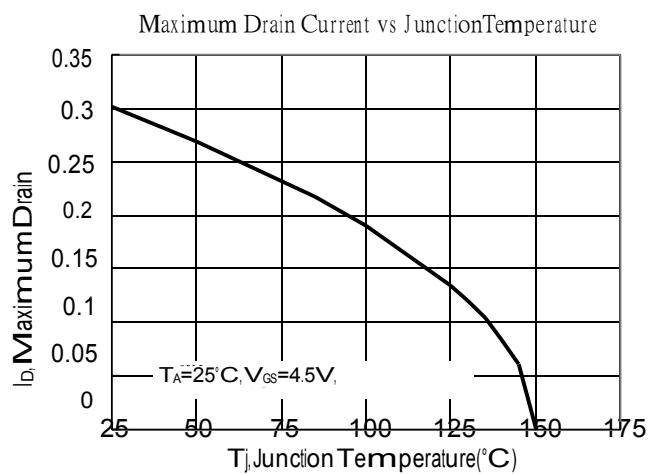
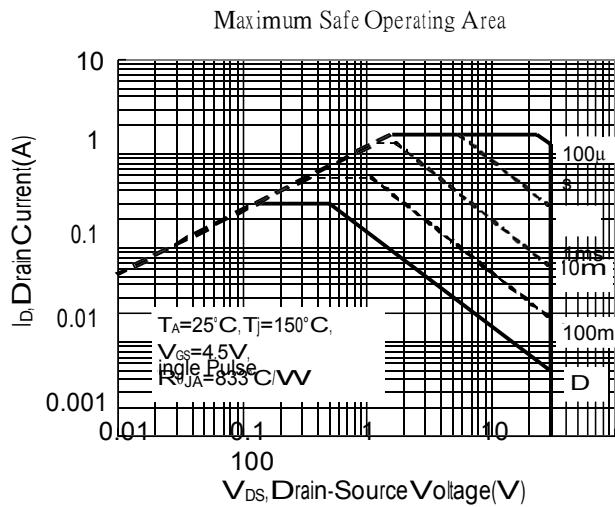
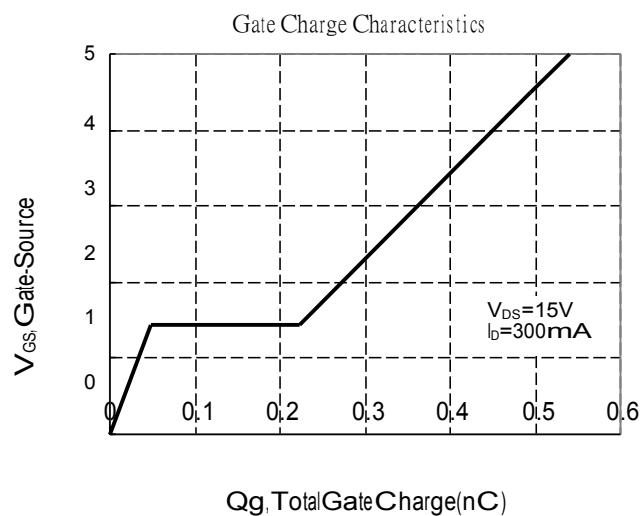
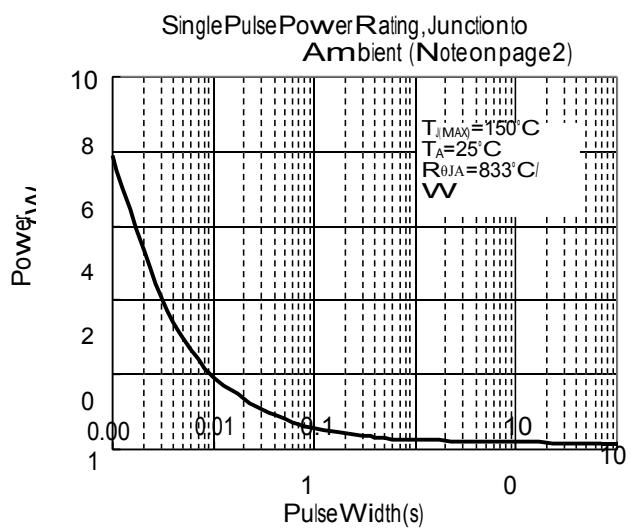
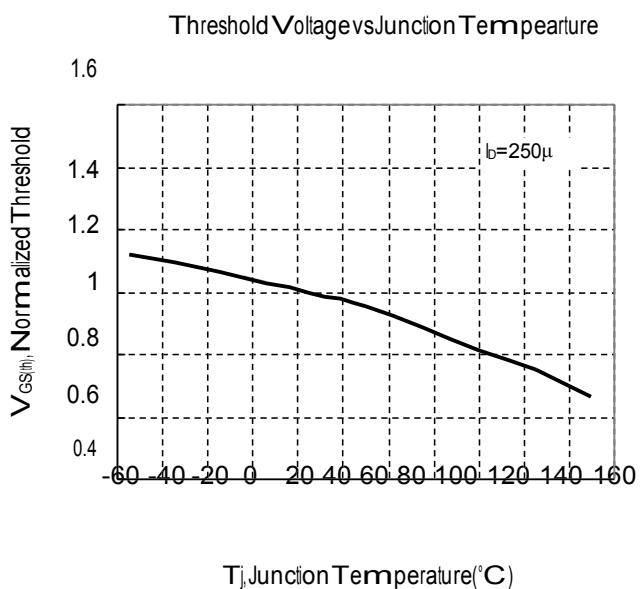
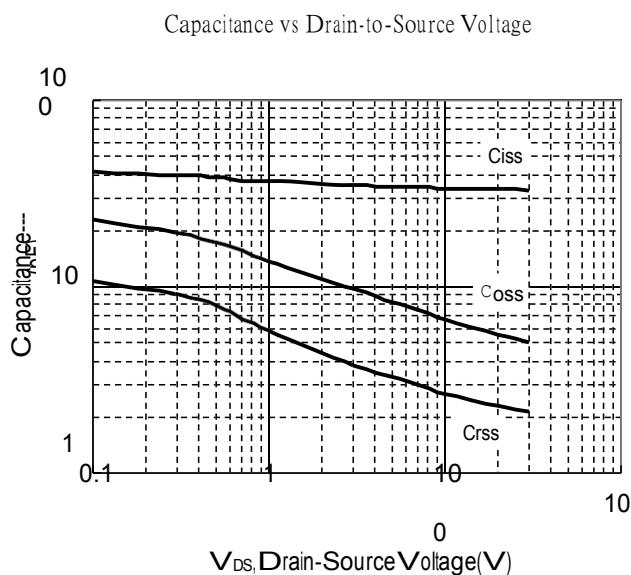


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Breakdown Voltage vs Ambient Temperature

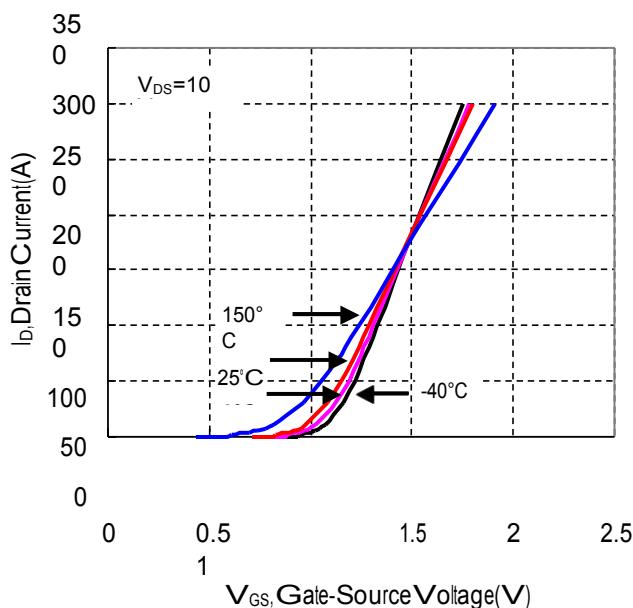


Typical Characteristics(Cont.)

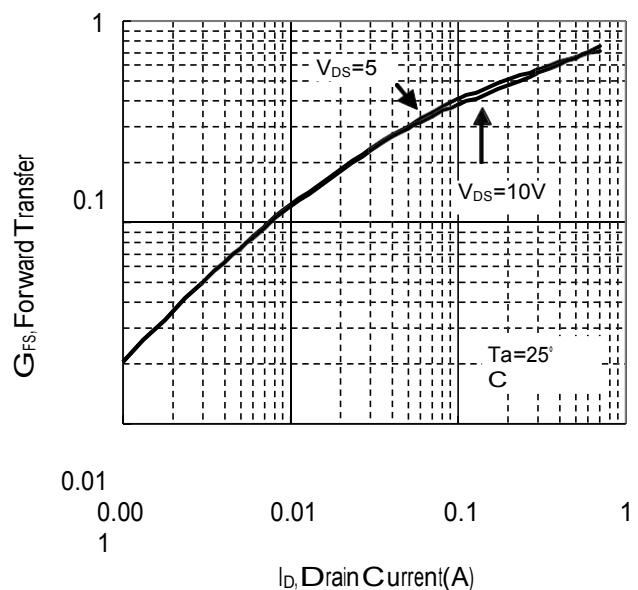


Typical Characteristics(Cont.)

Typical Transfer Characteristics



Forward Transfer Admittance vs Drain Current



Transient Thermal Response Curves

