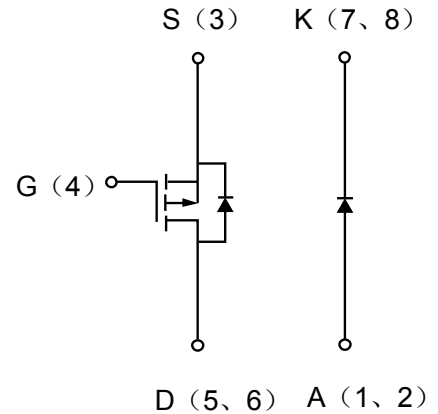


Description

MOSFET Product Summary		
$V_{DS}(V)$	$R_{DS(on)}(\Omega)$	$I_D(A)$
-20	0.110 @ $V_{GS}=-4.5V$	-2.8
	0.160 @ $V_{GS}=-2.5V$	-2.0
	0.240 @ $V_{GS}=-1.8V$	-1.8

Schottky Product Summary		
$V_{KA}(V)$	$V_F(V)$	$I_F(A)$
20	0.48V @ 0.5A	1.0


Electrical characteristics per line@25°C (unless otherwise specified)

Parameter		Symbol	Value	Units
Drain-Source Voltage (MOSFET and Schottky)		V_{DS}	-20	V
Reverse Voltage (Schottky)		V_{KA}	20	
Gate-Source Voltage (MOSFET)		V_{GS}	± 10	
Continuous Drain Current ($T_J=150^\circ C$) (MOSFET)	$T_A=25^\circ C$	I_D	-2.8	A
	$T_A=85^\circ C$		-1.9	
Pulsed Drain Current (MOSFET)		I_{DM}	-10	
Continuous Source Current (MOSFET Diode Conduction)		I_S	-0.9	
Average Forward Current (Schottky)		I_F	1.0	
Pulsed Forward Current (Schottky)		I_{FM}	7	
Maximum Power Dissipation (MOSFET)	$T_A=25^\circ C$	P_D	1.1	
	$T_A=85^\circ C$		0.6	
Maximum Power Dissipation (Schottky)	$T_A=25^\circ C$		0.96	
	$T_A=85^\circ C$		0.59	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 ~ 150	$^\circ C$
Soldering Recommendation (Peak Temperature)		T_{PS}	260	$^\circ C$

Absolute maximum ratings @25°C

Parameter	Condition	Symbol	Typical	Maximum	Unit	
Thermal Resistance (Junction to Ambient)	MOSFET	$t \leq 5\text{sec}$	R_{thJA}	50	60	°C/W
	Schottky			77	95	
	MOSFET	Steady State		90	110	
	Schottky			110	130	
Thermal Resistance (Junction to Pin)	MOSFET	Steady State	R_{thJP}	30	40	
	Schottky		33	40		

MOSFET Specifications ($T_J=25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu\text{A}$	-0.45			V
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0\text{V}, V_{GS}=\pm 8\text{V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-16\text{V}, V_{GS}=0\text{V}$			-1	μA
		$V_{DS}=-16\text{V}, V_{GS}=0\text{V}, T_J=85^\circ\text{C}$			-5	
On-State Drain Current	$I_D(on)$	$V_{DS}\leq -5\text{V}, V_{GS}=-4.5\text{V}$	-2			A
Drain-Source On-State Resistance	$R_{DS(on)}$	$V_{GS}=-4.5\text{V}, I_D=-2.8\text{A}$		0.095	0.110	Ω
		$V_{GS}=-2.5\text{V}, I_D=-2.0\text{A}$		0.140	0.160	
		$V_{GS}=-1.8\text{V}, I_D=-1.8\text{A}$		0.200	0.240	
Forward Tran Conductance	g_{fs}	$V_{DS}=-10\text{V}, I_D=-2.8\text{A}$		7		S
Diode Forward Voltage	V_{SD}	$I_S=-0.9\text{A}, V_{GS}=0\text{V}$		-0.8	-1.2	V
Dynamic						
Total Gate Charge	Q_g	$V_{DS}=-10\text{V}$ $V_{GS}=-4.5\text{V}$ $I_D=-2.8\text{A}$		4.2	6.0	nC
Gate-Source Charge	Q_{gs}			1.3		
Gate-Drain Charge	Q_{gd}			0.60		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=-10\text{V}, R_L=10\Omega$ $I_D=-1\text{A}$ $V_{GEN}=-4.5\text{V}, R_G=6\Omega$		15	23	ns
Rise Time	t_r			28	42	
Turn-Off Delay Time	$t_{d(off)}$			28	42	
Fall Time	t_f			25	38	
Source-Drain Reverse Recovery Time	t_{rr}	$I_F=-0.9\text{A}, di/dt=100\text{A}/\mu\text{s}$		20	40	

Schottky Specifications ($T_J=25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=0.5\text{A}$		0.43	0.48	V
		$I_F=0.5\text{A}, T_J=125^\circ\text{C}$		0.33	0.4	
Maximum Reverse Leakage Current	I_{rm}	$V_r=20\text{V}$		0.002	0.100	mA
		$V_r=20\text{V}, T_J=85^\circ\text{C}$		0.10	1	
		$V_r=20\text{V}, T_J=125^\circ\text{C}$		1.5	10	
Junction Capacitance	C_T	$V_r=10\text{V}$		31		pF

Typical Characteristics

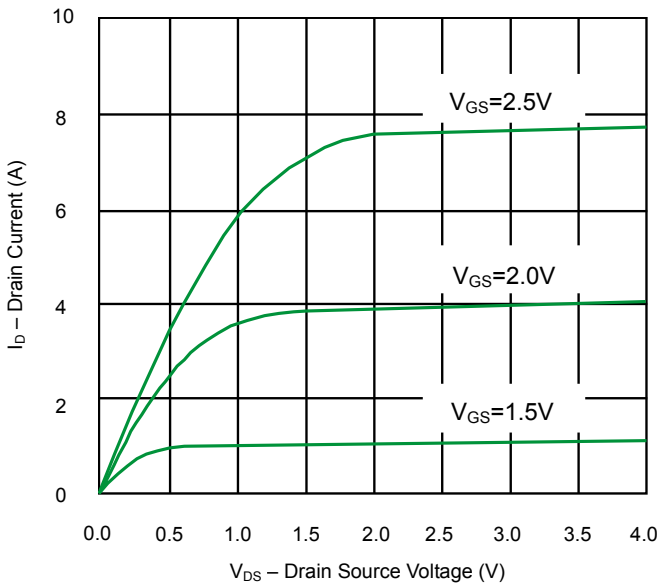


Fig 1. Output Characteristics

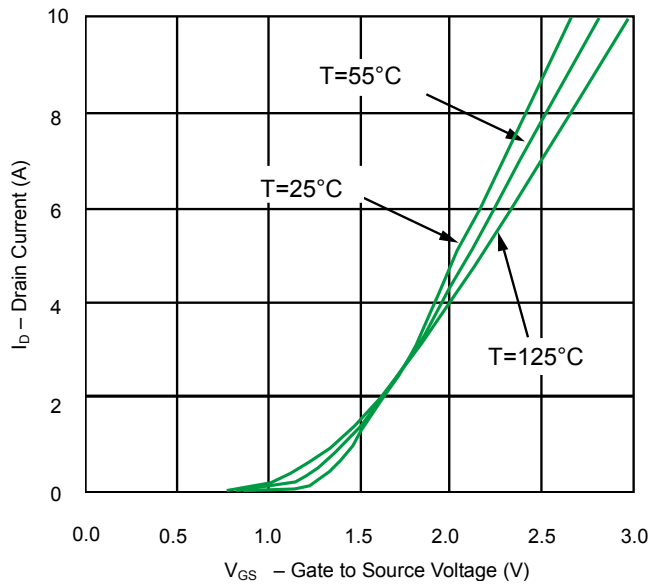


Fig 2. Transfer Characteristics

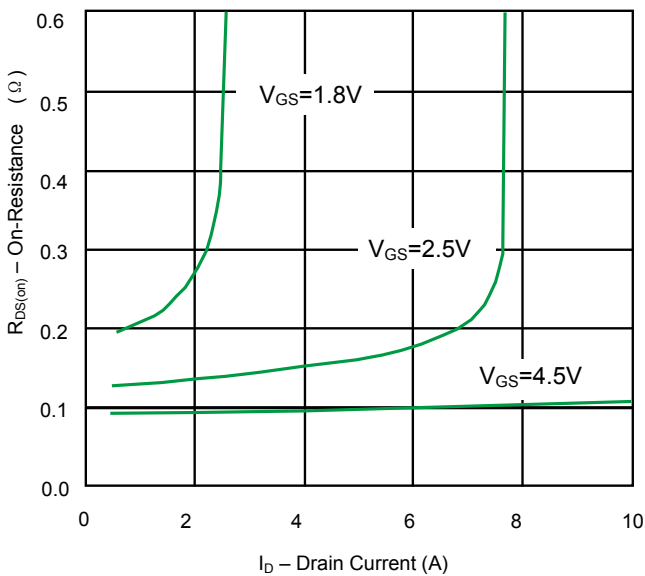


Fig 3. On-Resistance vs. Drain Current

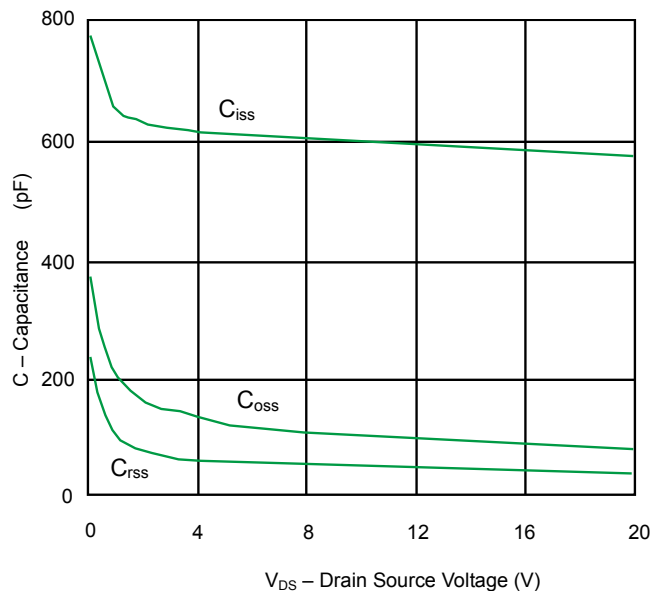
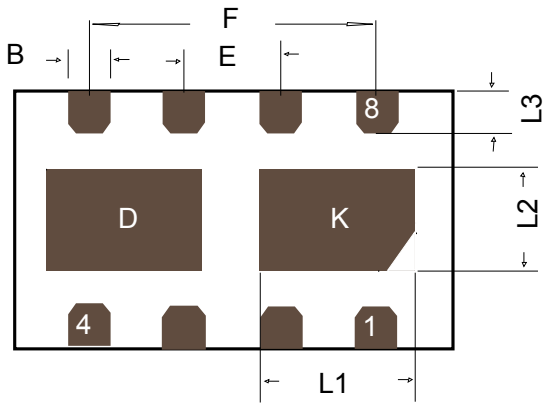


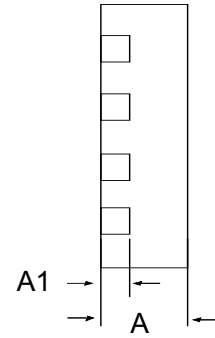
Fig 4. Capacitance

Product dimension (DFN3*2-8L)

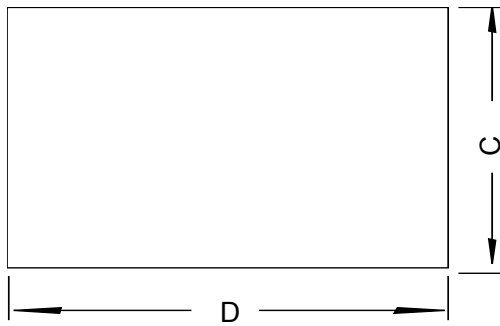
Bottom view



Side view




Top view



Dim	Millimeters	
	MIN	MAX
A	0.425	0.525
A1	0.108	0.154
B	0.23	0.33
C	1.95	2.05
D	2.95	3.05
E	0.60	0.70
F	1.90	2.00
L1	1.00	1.10
L2	0.75	0.85
L3	0.25	0.35


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