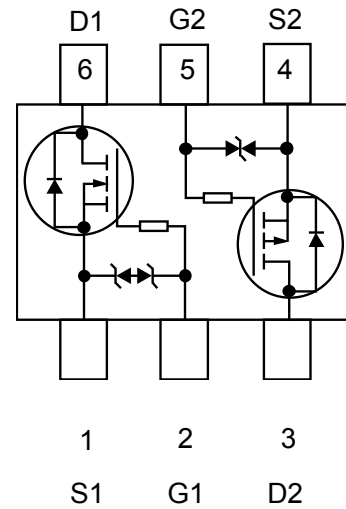


Description

The enhancement mode MOS is extremely high density cell and low on-resistance.

MOSFET Product Summary		
$V_{DS}(V)$	$R_{DS(on)}(\Omega)$	$I_D(A)$
N-Channel 20	0.3@ $V_{GS}=4.0V$	0.6
	0.45@ $V_{GS}=2.5V$	
	0.6@ $V_{GS}=1.8V$	
P-Channel -20	0.9@ $V_{GS}=-4.5V$	-0.8
	1.2@ $V_{GS}=-2.5V$	
	1.5@ $V_{GS}=-1.8V$	



N-Channel

Absolute maximum rating @25°C

Rating	Symbol	Value	Units
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 8	V
Drain Current	Continuous	I_D	0.6 A
	Pulsed	I_D	3.0 A
Total Power Dissipation	$T_A=25^\circ C$	P_D	170 mW
	$T_A=125^\circ C$	P_D	155 mW

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D = 250\mu A, V_{GS} = 0V$	20		-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$	-	-	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 8V$	-	-	± 1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.5		1.1	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 4.0V, I_D = 300mA$	-	0.3	0.5	Ω
		$V_{GS} = 2.5V, I_D = 200mA$	-	0.45	0.7	Ω
		$V_{GS} = 1.8V, I_D = 150mA$		0.6	0.9	Ω
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	$V_{GS} = 0V, V_{DS} = 16V,$ $f = 1MHz$	-	135		pF
Output Capacitance	C_{DSS}		-	23		pF
Reverse Transfer Capacitance	C_{RSS}		-	18		pF
SWITCHING PARAMETERS						
Turn-On Delay Time	$t_{d(on)}$	$V_{DS} = 10V, V_{GS} = 4.5V,$ $R_G = 10\Omega,$ $I_D = 0.2A$	-		15	ns
Turn-Off Delay Time	$t_{d(off)}$		-		55	ns

P-Channel

Absolute maximum rating @25°C

Rating		Symbol	Value	Units
Drain-Source Voltage		V_{DS}	-20	V
Gate-Source Voltage		V_{GS}	± 8	V
Drain Current	Continuous	I_D	-0.8	A
	Pulsed	I_D	-3	A
Total Power Dissipation	$T_A = 25^\circ C$	P_D	250	mW
	$T_A = 125^\circ C$	P_D	200	mW

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D = -250\mu A, V_{GS} = 0V$	-20	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$	-	-	-1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 10V$	-	-	± 1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.5		-1.1	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS} = -4.5V, I_D = -200mA$	-	0.9	1.2	Ω
		$V_{GS} = -2.5V, I_D = -100mA$	-	1.2	1.5	Ω
		$V_{GS} = -1.8V, I_D = -100mA$		1.5	2.2	Ω
Forward Transconductance	g_{FS}	$V_{GS} = 5V, I_D = 50mA, T_A = 125^\circ C$		6.5		S
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	$V_{GS} = 0V, V_{DS} = -6V,$ $f = 200KMHZ$	-	200		pF
Output Capacitance	C_{DSS}		-	80		pF
Reverse Transfer Capacitance	C_{RSS}		-	150		pF
SWITCHING PARAMETERS						
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -6V, V_{GS} = -4.5V,$ $R_L = 6\Omega, R_G = 6\Omega,$ $I_D = -1A$	-		17	ns
Turn-Off Delay Time	$t_{d(off)}$		-		65	ns

N-Channel

Typical Characteristics

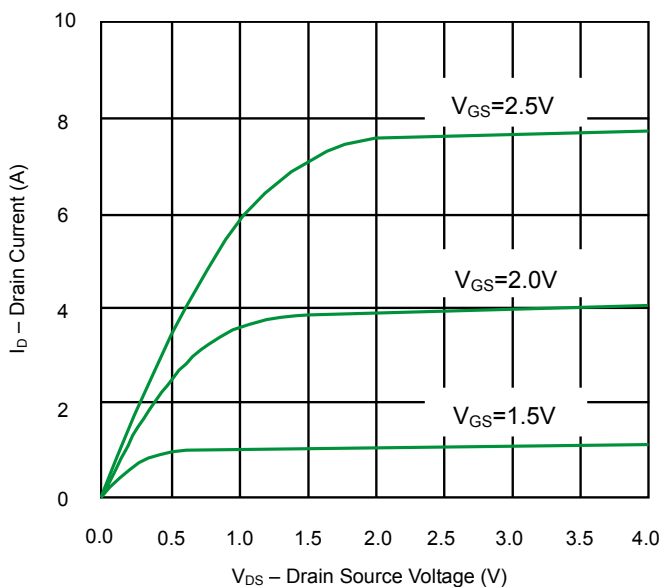


Fig 1. Output Characteristics

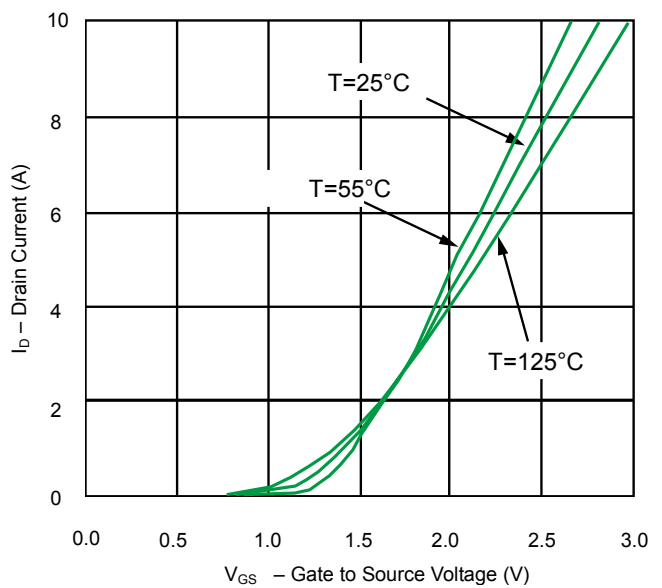


Fig 2. Transfer Characteristics

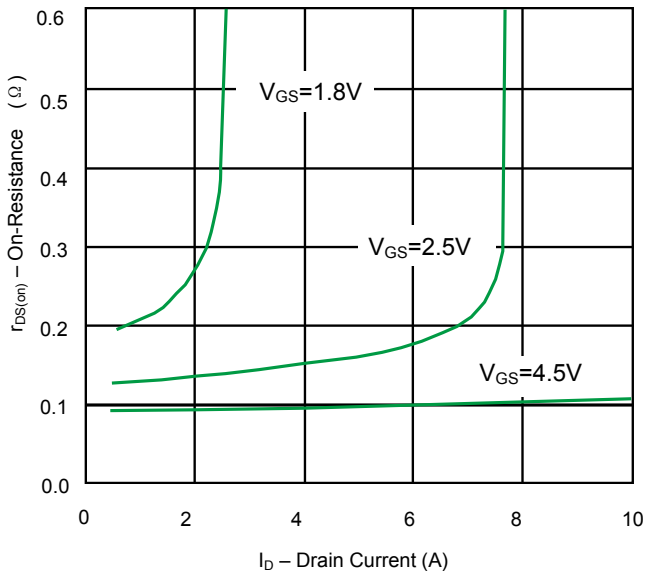


Fig 3. On-Resistance vs. Drain Current

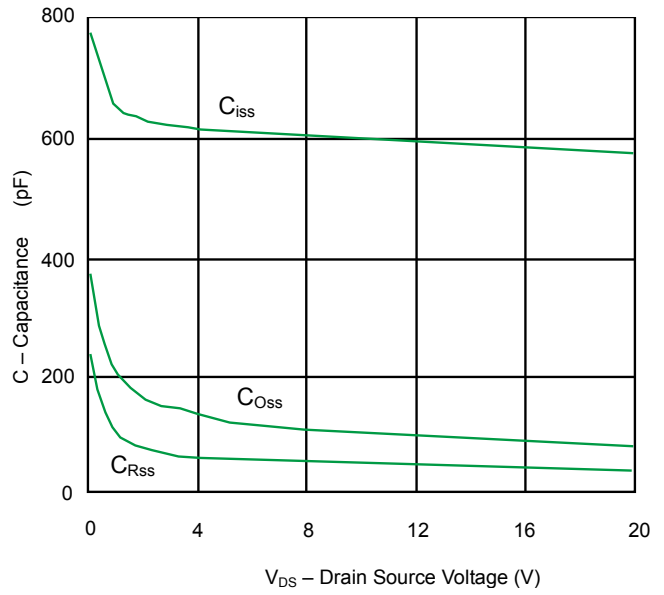


Fig 4. Capacitance

P-Channel

Typical Characteristics

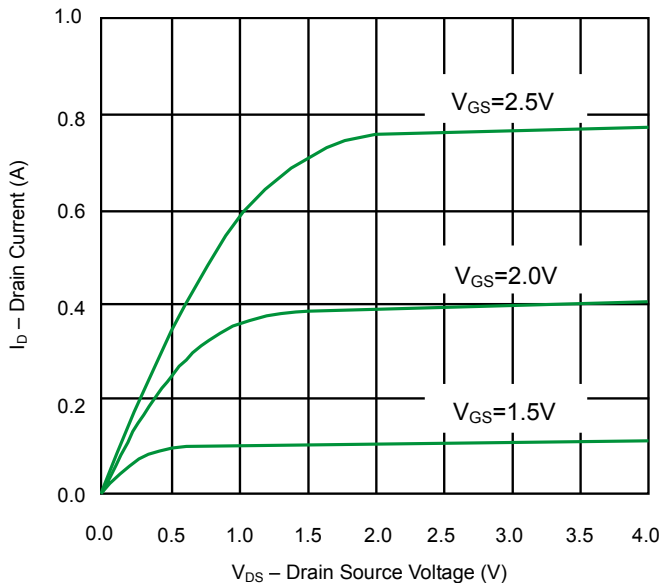


Fig 1. Output Characteristics

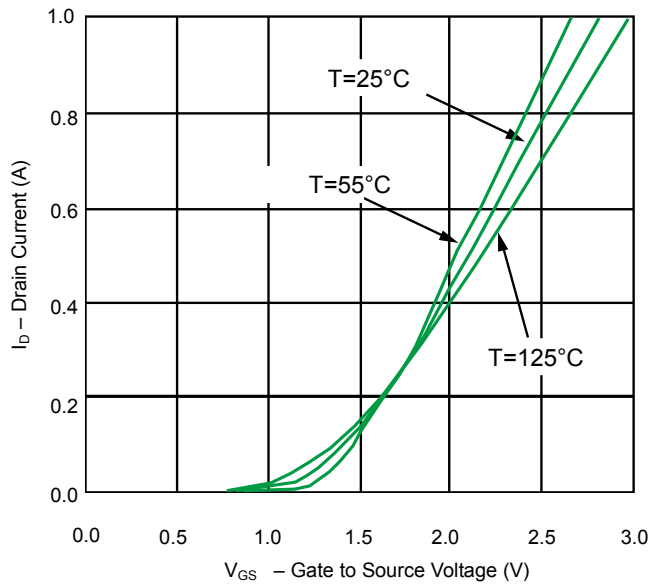


Fig 2. Transfer Characteristics

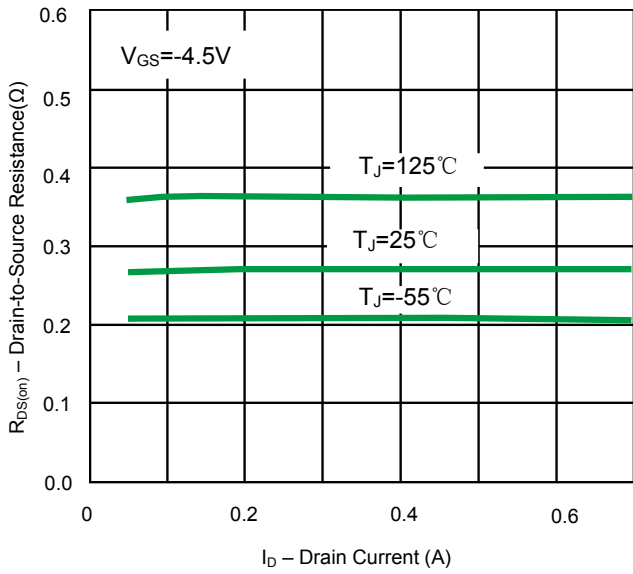


Fig 3. On-Resistance vs. Drain Current

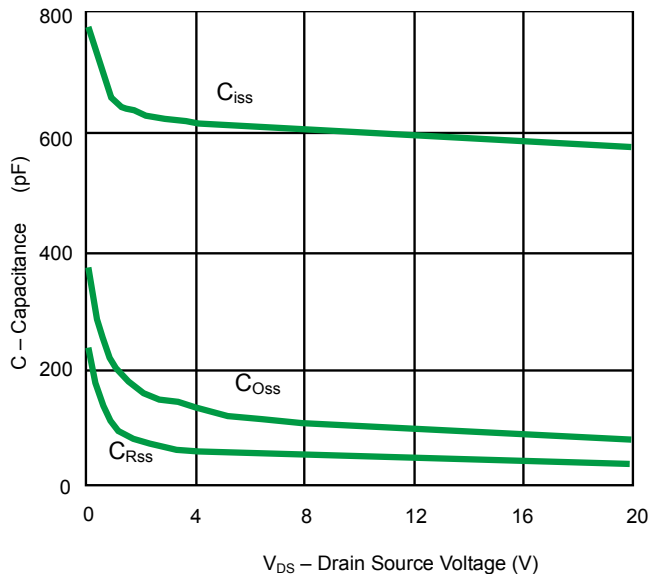
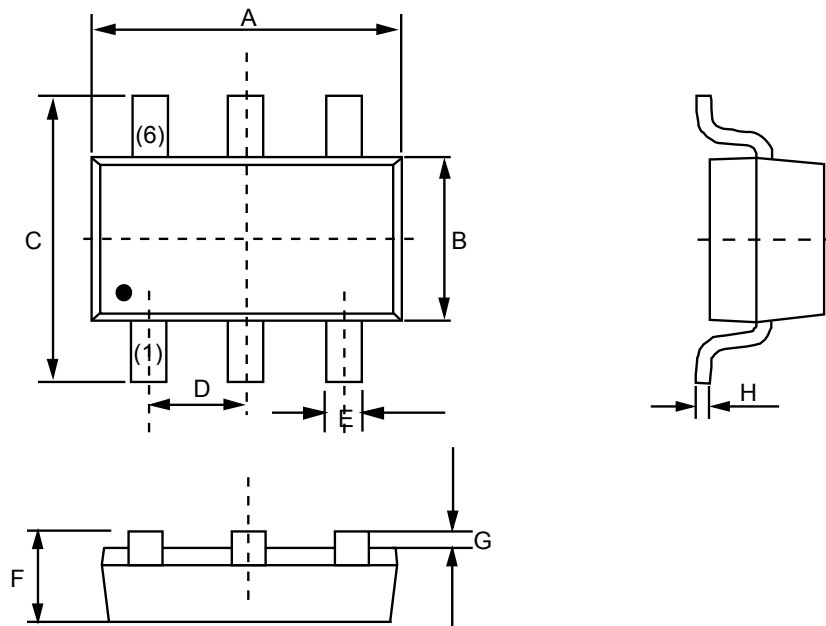



Fig 4. Capacitance

Product dimension (SOT-363)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	2.0	2.2	0.079	0.087
B	1.15	1.35	0.045	0.053
C	2.15	2.45	0.085	0.096
D	0.65BSC		0.026BSC	
E	0.15	0.35	0.006	0.014
F	0.90	1.10	0.035	0.043
G	0.00	0.10	0.000	0.004
H	0.08	0.15	0.003	0.006


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