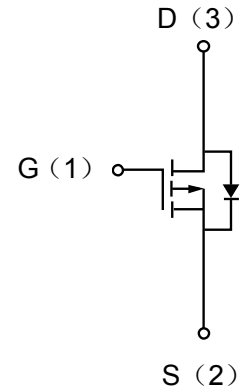


Description

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

MOSFET Product Summary		
$V_{DS}(V)$	$R_{DS(on)}(\Omega)$	$I_D(A)$
-30	0.058 @ $V_{GS}=-10V$	-3
	0.075 @ $V_{GS}=-4.5V$	


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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
OFF/ON CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=-250\mu A, V_{GS}=0V$	-30		-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-30V, V_{GS}=0V$	-	-	-1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$	-	-	± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1	-	-3	V
Static Drain-Source On-Resistance ^a	$R_{DS(ON)}$	$V_{GS}=-4.5V, I_D=-2.5A$	-	75	95	m Ω
		$V_{GS}=-10V, I_D=-3.2A$	-	58	70	m Ω
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	$V_{GS}=0V, V_{DS}=-15V,$ $f=1MHz$	-	460		pF
Output Capacitance	C_{OSS}		-	74		pF
Reverse Transfer Capacitance	C_{RSS}		-	23		pF
SWITCHING PARAMETERS						
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=-15V, V_{GS}=-10V,$ $R_G=6\Omega, R_L=15\Omega$	-	33		ns
Turn-Off Delay Time	$t_{d(off)}$		-	39		ns
Turn-On Rise Time	t_r		-	17		ns
Turn-On Fall Time	t_f		-	5		ns
Total Gate Charge	Q_g	$V_{DS}=-15V, V_{GS}=-10V,$ $I_D=-1.7A$		14		nC
Total Gate Charge	Q_g	$V_{DS}=-15V, V_{GS}=-4.5V,$ $I_D=-1.7A$		6.8		nC
Gate-Source Charge	Q_{gs}			2.8		nC
Gate-Drain Charge	Q_{gd}			2.3		nC
Gate resistance	R_g	$V_{DS}=0V, V_{GS}=0V, f=1MHz$		3.5		Ω
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_S=-1.0A$		-0.8	-1.2	V

Absolute maximum rating@25°C

Parameter	Symbol	Value	Units
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current ($T_J=150^\circ\text{C}$)	I_D	$T_A=25^\circ\text{C}$	-3
		$T_A=70^\circ\text{C}$	-2.5
Pulsed Drain Current	I_{DM}	-12	A
Maximum Power Dissipation	P_D	$T_A=25^\circ\text{C}$	1.04
		$T_A=70^\circ\text{C}$	0.67
Operating Junction and Storage Temperature Range	T_J	-55 to 150	$^\circ\text{C}$
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	120	$^\circ\text{C/W}$

Typical Characteristics

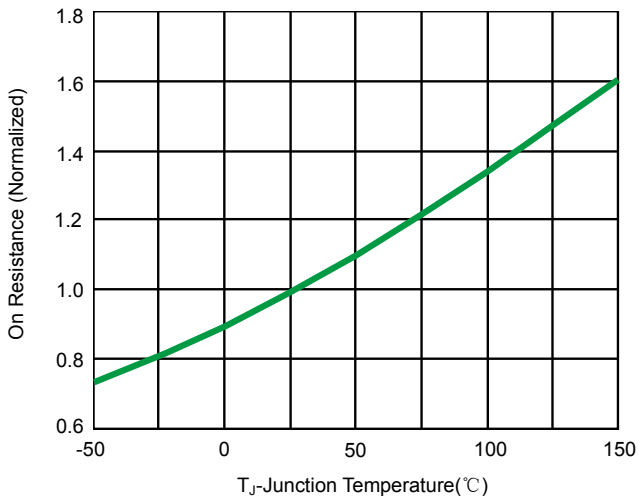


Fig 1. On Resistance vs. Junction Temperature

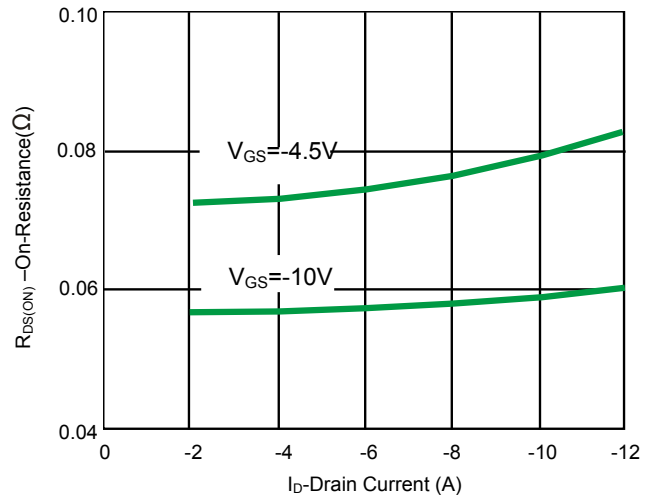


Fig 2. On-Resistance vs. Drain Current

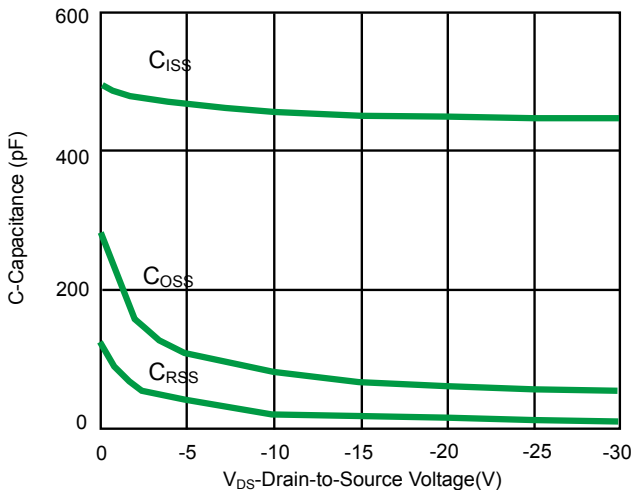


Fig 3. Capacitance

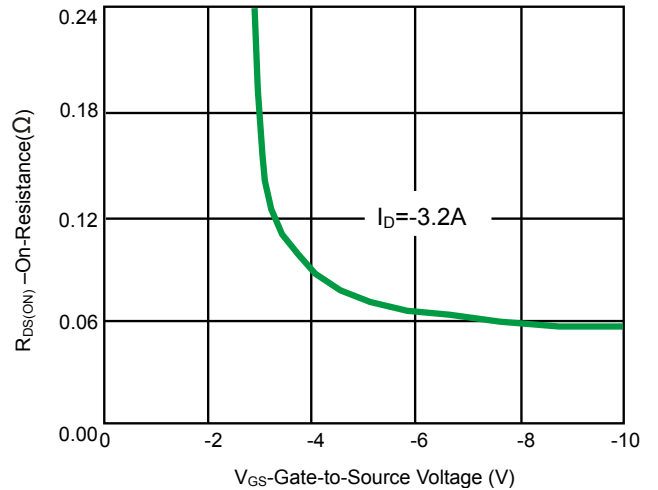


Fig 4. On-Resistance vs. Gate-to-Source Voltage

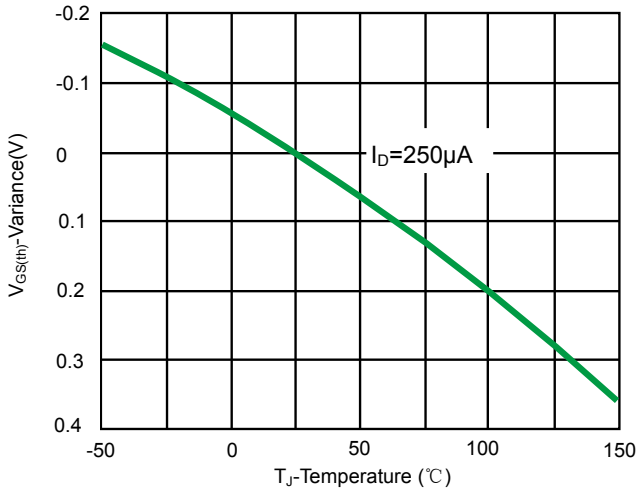


Fig 5. Threshold Voltage

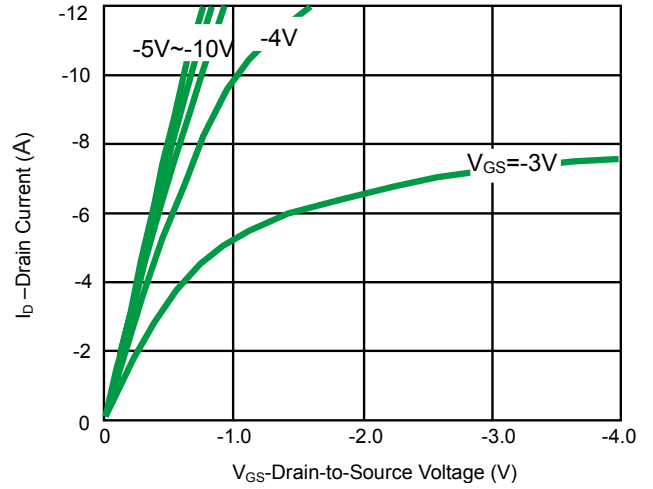


Fig 6. On-Region Characteristics

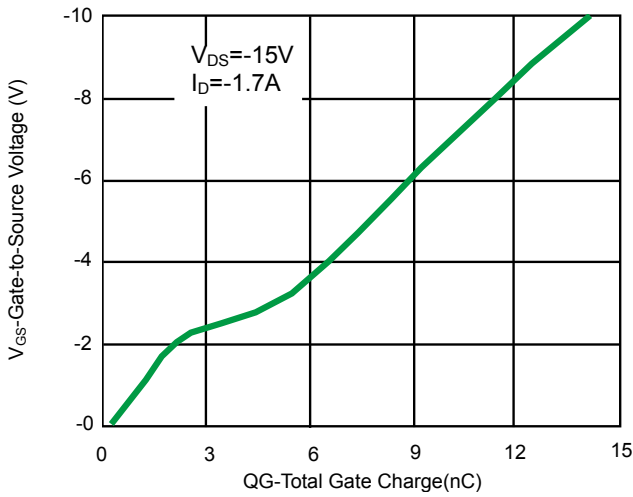


Fig 7. Gate Charge

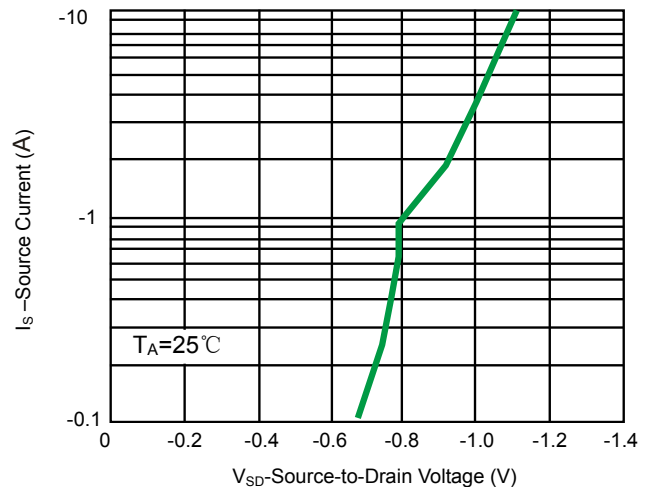


Fig 8. On-Resistance vs. Drain Current

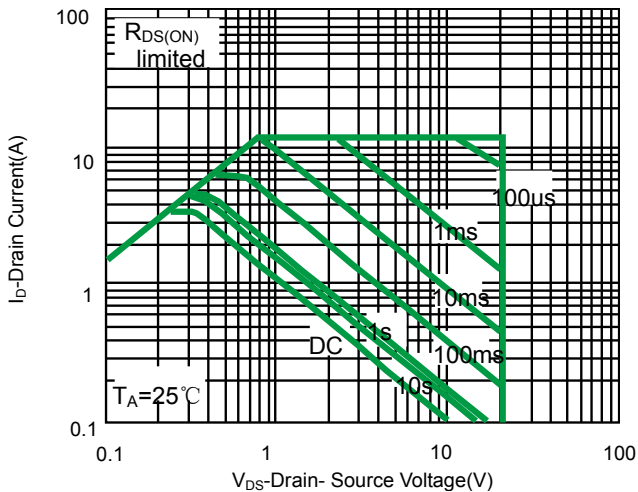


Fig 9. Maximum Forward Biased Safe Operating Area

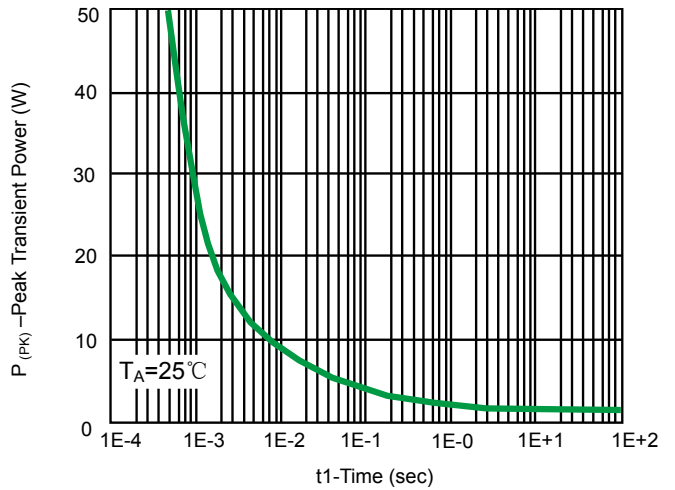


Fig 10. Single Pulse Maximum Power Dissipation

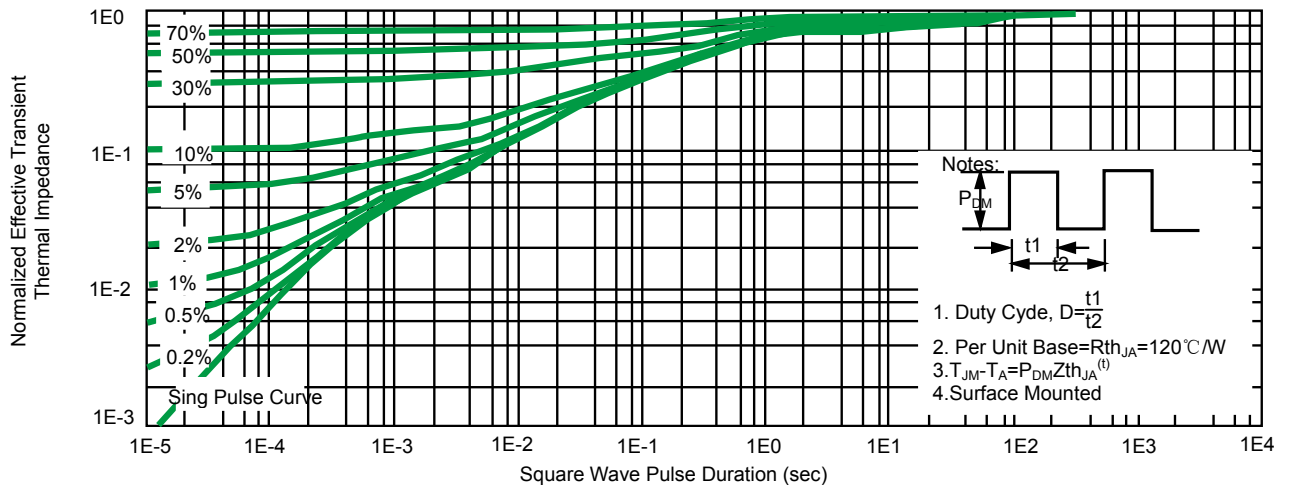
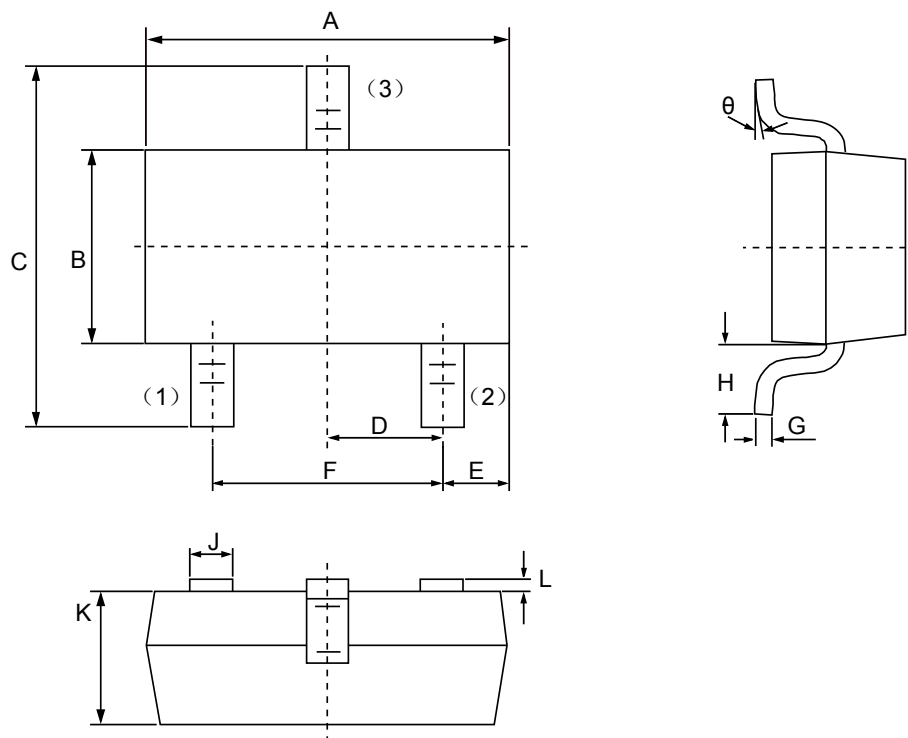



Fig 11. Normalized Thermal Transient Impedance, Junction-to-Ambient

Product dimension(SOT-23)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	2.80	3.00	0.1102	0.1197
B	1.20	1.40	0.0472	0.0551
C	2.10	2.50	0.0830	0.0984
D	0.89	1.02	0.0350	0.0401
E	0.45	0.60	0.0177	0.0236
F	1.78	2.04	0.0701	0.0807
G	0.085	0.177	0.0034	0.0070
H	0.45	0.60	0.0180	0.0236
J	0.37	0.50	0.0150	0.0200
K	0.89	1.11	0.0350	0.0440
L	0.013	0.100	0.0005	0.0040
θ	0°	10°	0°	10°


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