Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
100V	15mΩ@10V	8A
	18mΩ@4.5V	

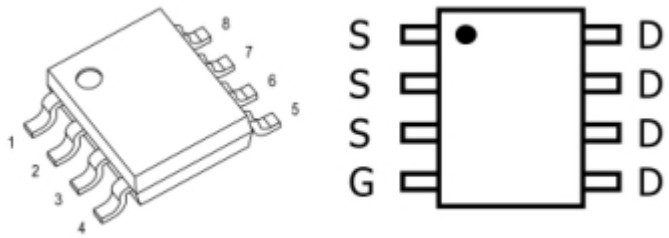
Feature

- Fast Switching
- Low Gate Charge and Rdson
- Advanced Split Gate Trench Technology
- 100% Single Pulse avalanche energy Test

Application

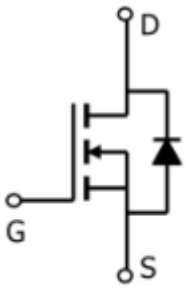
- Power switching application
- DC-DC Converter

Package

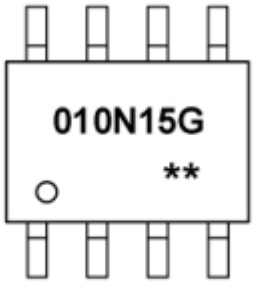


SOP-8L

Circuit diagram



Marking



010N15G =Device Code
** =Week Code

Absolute maximum ratings

(T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current (Tc=25℃)	I_D	8	A
Pulsed Drain Current[1]	I_{DM}	32	A
Single Pulse Avalanche Energy[2]	E_{AS}	81	mJ
Total Power Dissipation	P_D	2.5	W
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	50	℃/ W
Storage Temperature Range	T_{STG}	-55~ +150	℃
Operating Junction Temperature Range	T_J	-55~ +150	℃

Electrical characteristics

(T_A=25℃, unless otherwise noted)

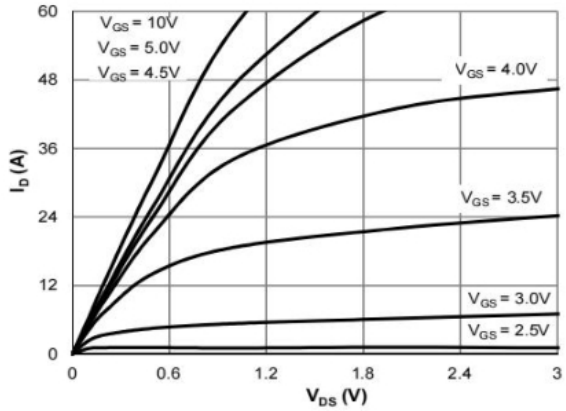
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	BV_{DSS}	V_{GS} = 0V, I_D =250μA	100			V
Drain-Source Leakage Current	I_{DSS}	V_{DS} =80V,V_{GS} = 0V , T_J=25℃			1	uA
Gate-Source Leakage Current	I_{GSS}	V_{GS} =±20V , V_{DS}=0V			±100	uA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	1	1.8	2.5	V
Static Drain-Source on-Resistance[2]	$R_{DS(on)}$	V_{GS} =10V, I_D =8A		15	19	mΩ
		V_{GS} =4.5V, I_D =6A		18	24	
Dynamic characteristics						
Input Capacitance	C_{iss}	V_{DS}=50V,V_{GS}=0V, f=1MHz		2071		pF
Output Capacitance	C_{oss}			241		
Reverse Transfer Capacitance	C_{rss}			21		
Switching Characteristics						
Total Gate Charge (4.5V)	Q_g	V_{DS}=50V, V_{GS}=10V, I_D=5A		12.5		nC
Gate-Source Charge	Q_{gS}			2.1		
Gate-Drain Charge	Q_{gd}			3.3		
Turn-On Delay Time	$T_{d(on)}$	V_{DD}=50V, V_{GS}=10V, R_G=3Ω, I_D=5A		4.3		nS
Rise Time	T_r			5.1		
Turn-Off Delay Time	$T_{d(off)}$			16		
Fall Time	T_f			7		
Drain-Source Diode Characteristics						
Diode forward voltage[2]	V_{SD}	V_{GS}=0V, I_S=1A, T_J=25℃			1.2	V

Notes:

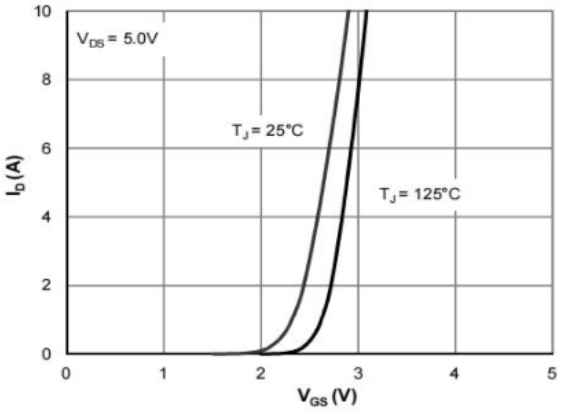
1. The data tested by pulsed , pulse width ≦ 300us , duty cycle ≦ 2%

2. The EAS data shows Max. rating . The test condition is V_{DD}=50V,V_{GS}=10V,L=0.5mH,Rg=25mΩ

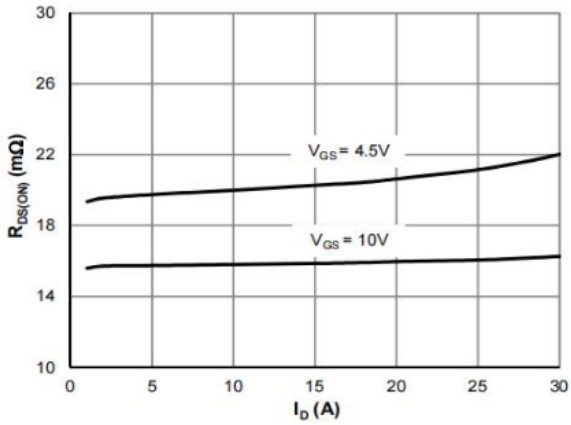
Typical Characteristics



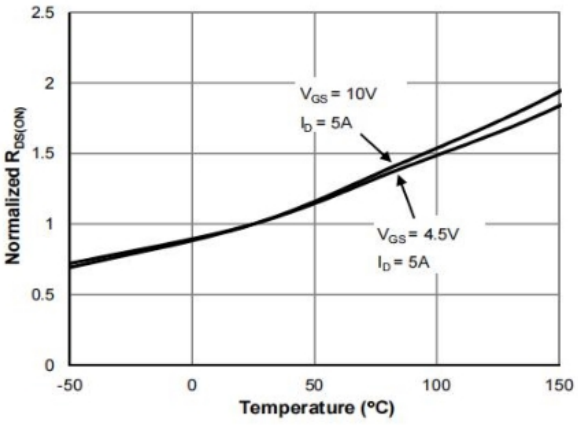
Typical Output Characteristics



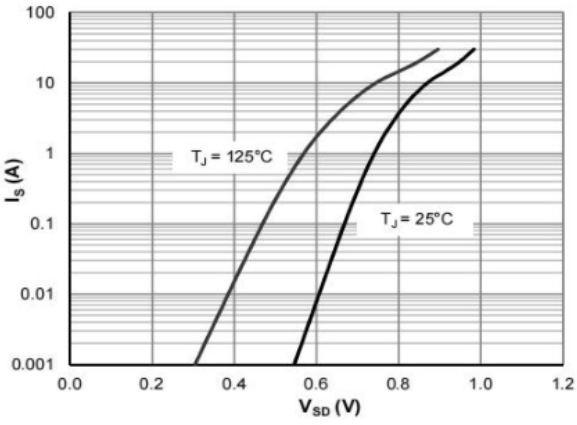
Transfer Characteristics



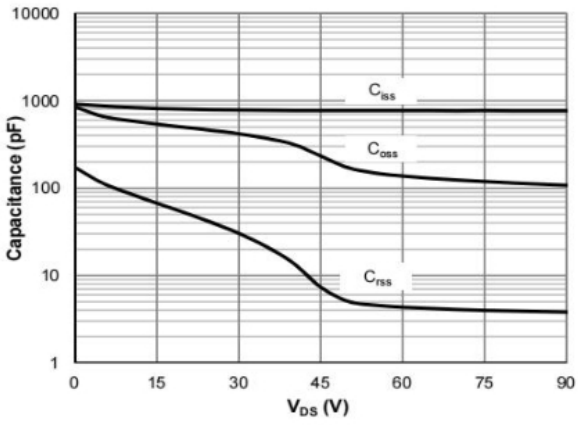
On-Resistance vs.Drain Current



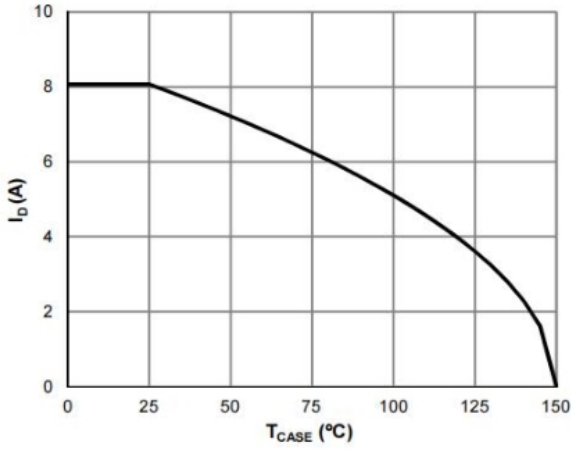
On-Resistance vs.Junction Temperature



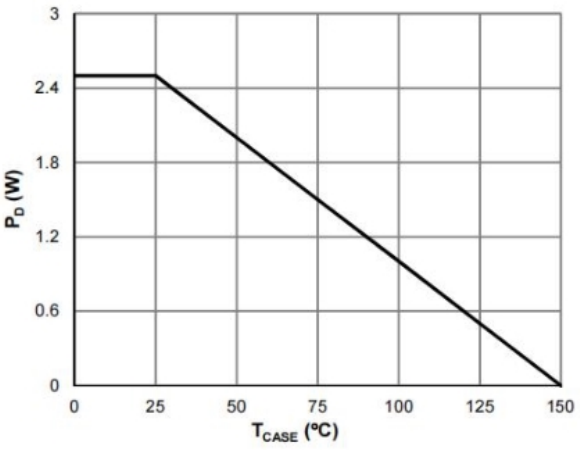
Body-Diode Characteristics



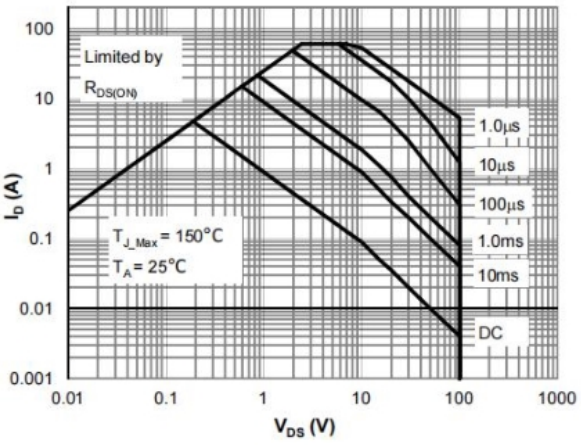
Capacitance Characteristics



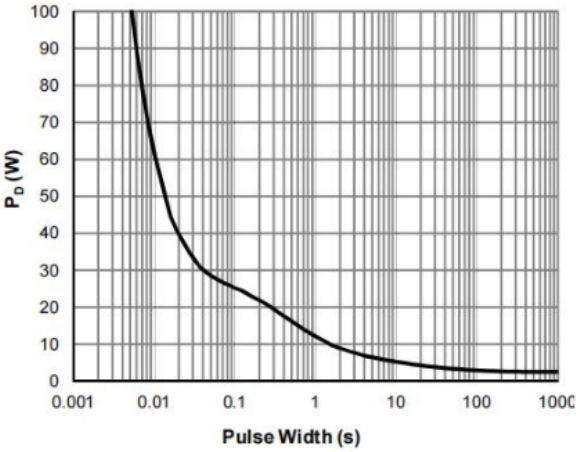
Current De-rating



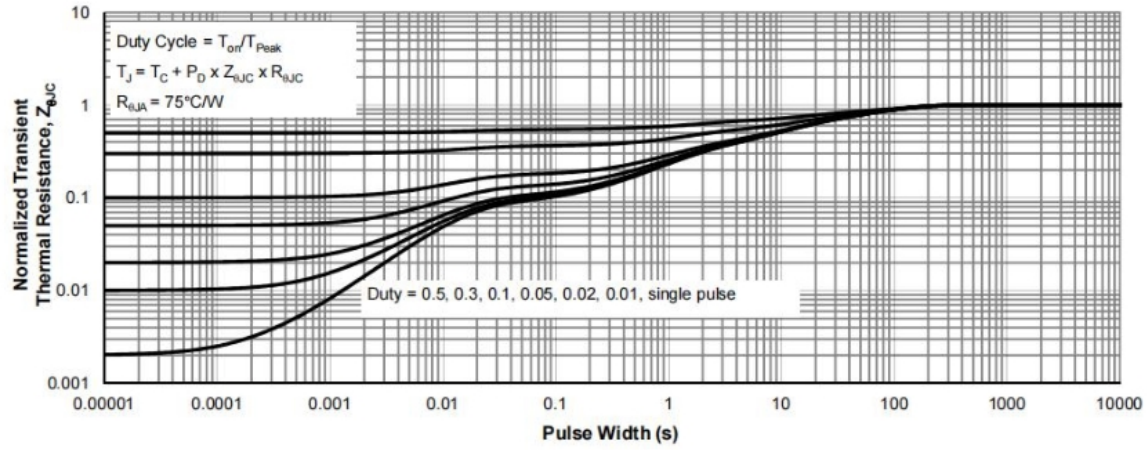
Power De-rating



Maximum Safe Operating Area

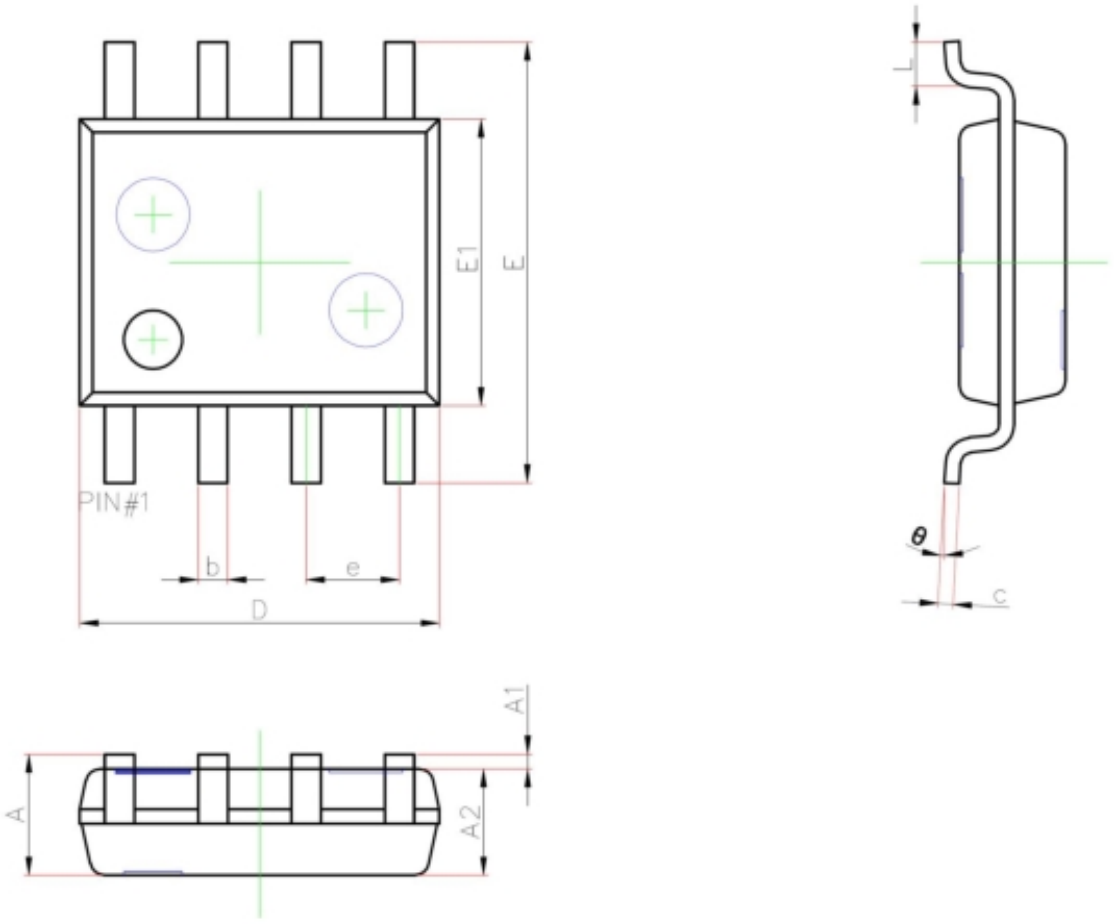


Single Pulse Power Rating,Junction-to-Case



Normalized Maximum Transient Thermal Impedance

SOP-8 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	1.35	1.75
A1	0.10	0.25
A2	1.35	1.55
b	0.33	0.51
c	0.17	0.25
D	4.80	5.00
e	1.27 REF.	
E	5.80	6.20
E1	3.80	4.00
L	0.40	1.27
θ	0°	8°