



Product Summary

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

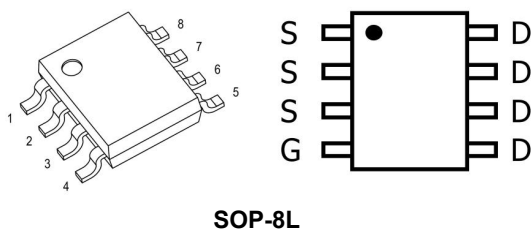
Feature

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

Applications

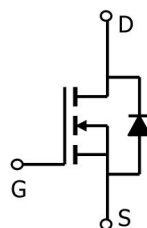
- Power switching application
- DC-DC Converter

Package

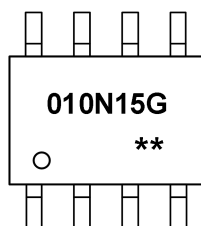


SOP-8L

Circuit diagram



Marking



010N15G =Device Code
** =Week Code

**Absolute maximum ratings (Ta=25°C unless otherwise noted)**

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current (Tc=25°C)	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	°C/W
Storage Temperature Range	T_{STG}	-55 to 150	°C
Operating Junction Temperature Range	T_J	-55 to 150	°C

Electrical characteristics (Ta=25°C, unless otherwise noted)

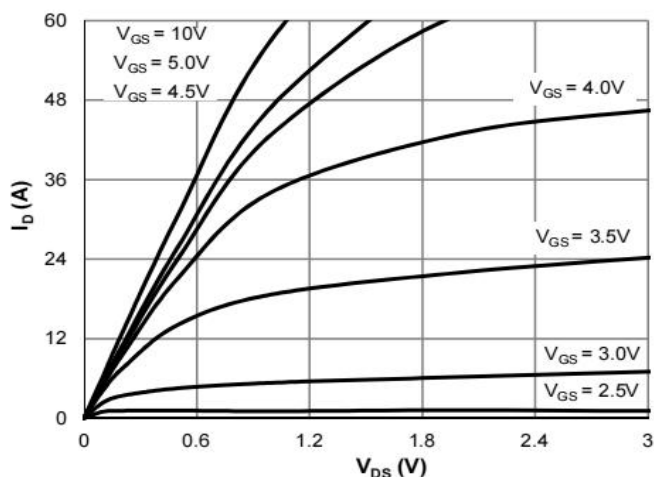
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	VGS=0V , ID=250uA	100	---	---	V
Drain-Source Leakage Current	IDSS	VDS=80V , VGS=0V , TJ=25℃	---	---	1	uA
Gate-Source Leakage Current	IGSS	VGS=±20V , VDS=0V	---	---	±100	nA
Gate Threshold Voltage	VGS(th)	VGS=VDS , ID =250uA	1.0	1.8	2.5	V
Static Drain-Source On-Resistance ²	RDS(ON)	VGS=10V , ID=8A	---	15	19	mΩ
		VGS=4.5V , ID=6A	---	18	24	
Dynamic Characteristics						
Input Capacitance	Ciss	VDS=50V , VGS=0V , f=1MHz	---	2071	---	pF
Output Capacitance	Coss		---	241	---	
Reverse Transfer Capacitance	Crss		---	21	---	
Switching Characteristics						
Total Gate Charge	Qg	VDS=50V , VGS=10V , ID=5A	---	12.5	---	nC
Gate-Source Charge	Qgs		---	2.1	---	
Gate-Drain Charge	Qgd		---	3.3	---	
Turn-On Delay Time	Td(on)	VDD=50V , VGS=10V , RG=3Ω , ID=5A	---	4.3	---	ns
Rise Time	Tr		---	5.1	---	
Turn-Off Delay Time	Td(off)		---	16	---	
Fall Time	Tf		---	7	---	
Source-Drain Diode Characteristics						
Diode Forward Voltage ²	VSD	VGS=0V , IS=1A , TJ=25℃	---	---	1.2	V

Note :

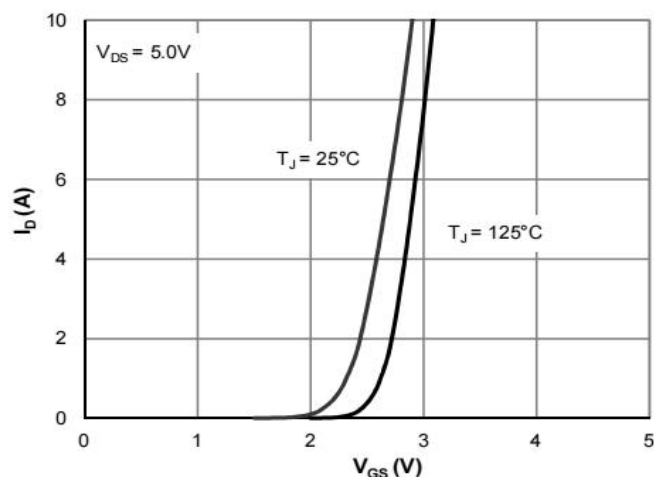
- The data tested by pulsed , pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$
- The EAS data shows Max. rating . The test condition is $V_{DD}=50V$, $V_{GS}=10V$, $L=0.5mH$, $R_g=25m\Omega$



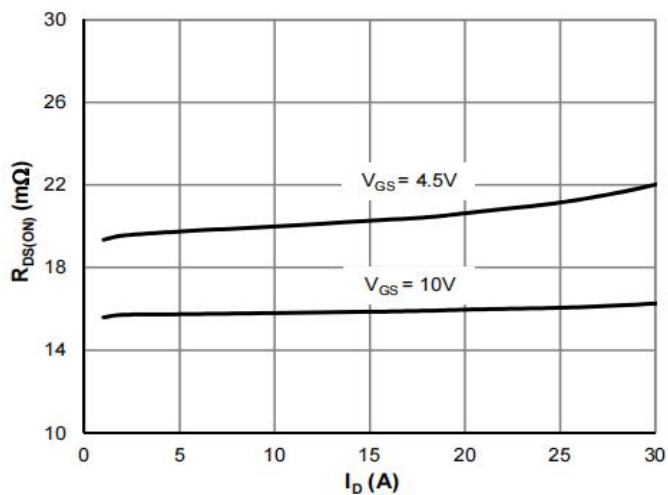
Typical Characteristics



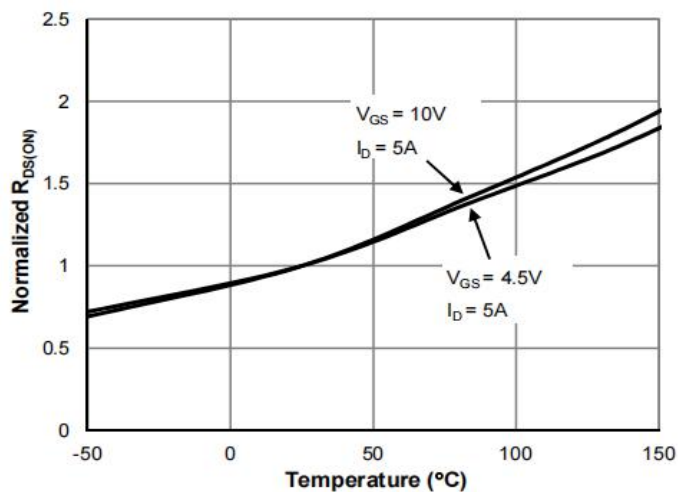
Typical Output Characteristics



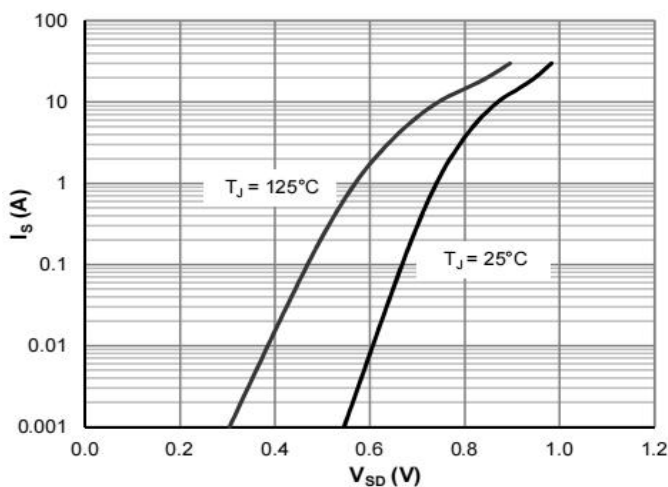
Transfer Characteristics



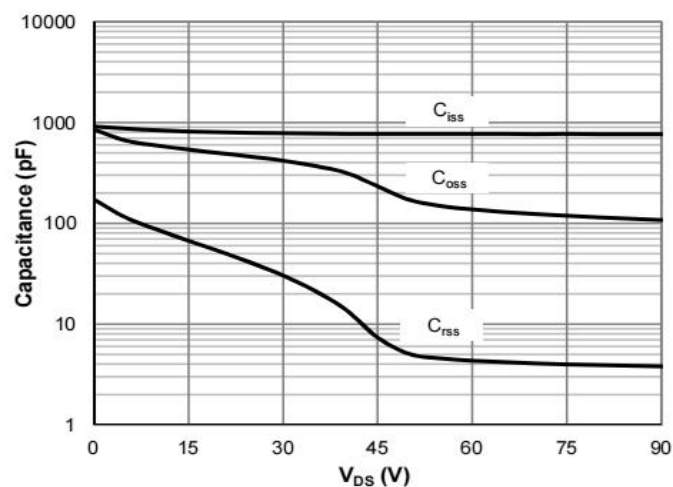
On-Resistance vs. Drain Current



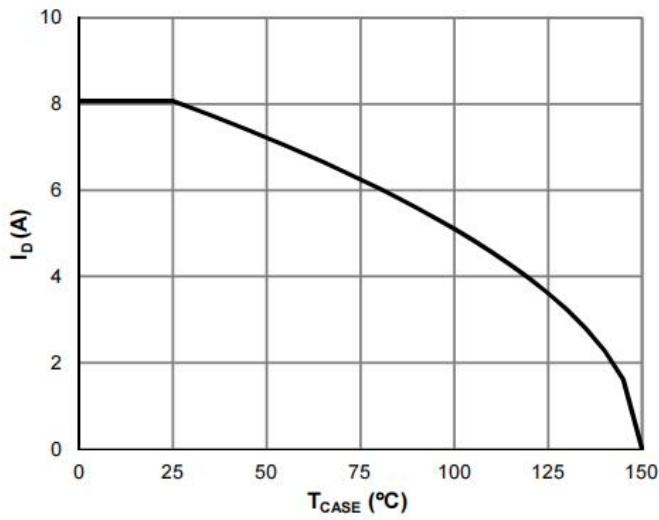
On-Resistance vs. Junction Temperature



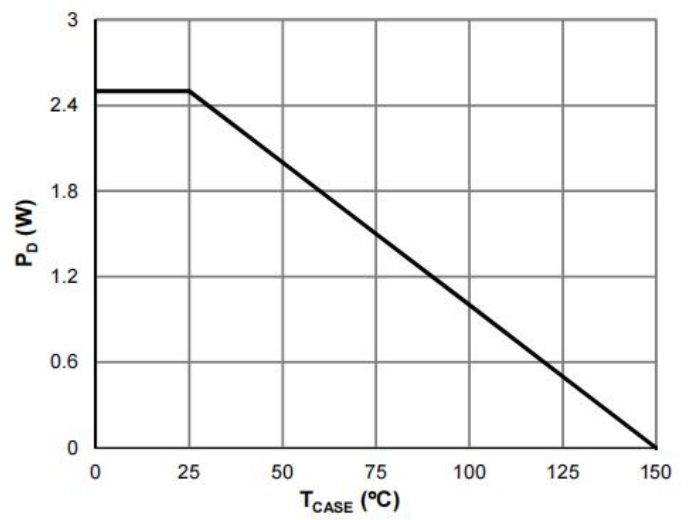
Body-Diode Characteristics



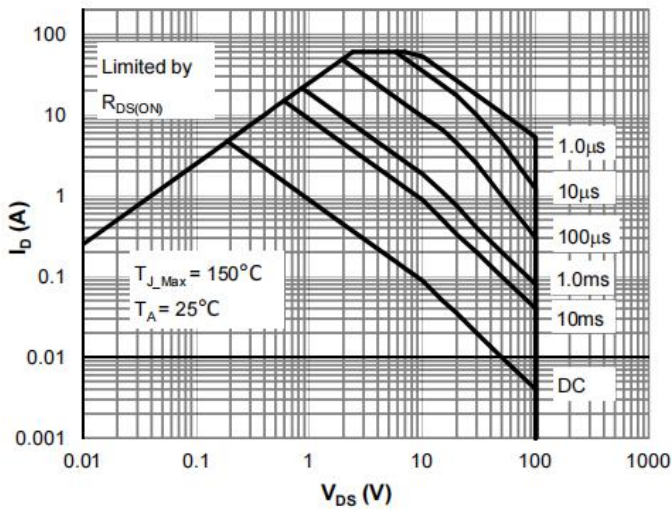
Capacitance Characteristics



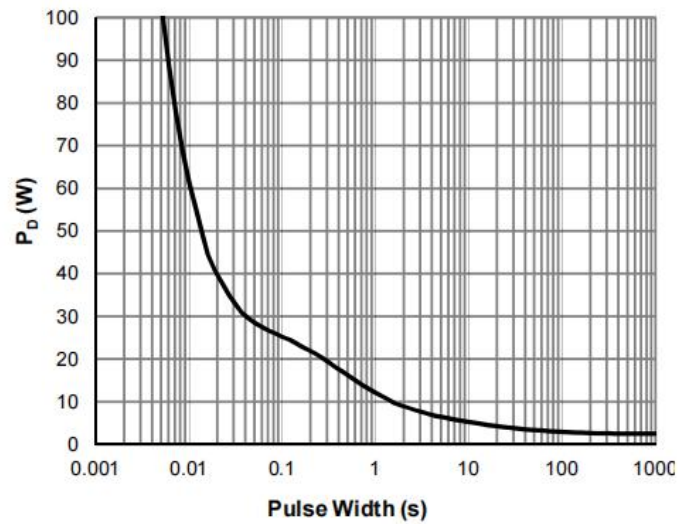
Current De-rating



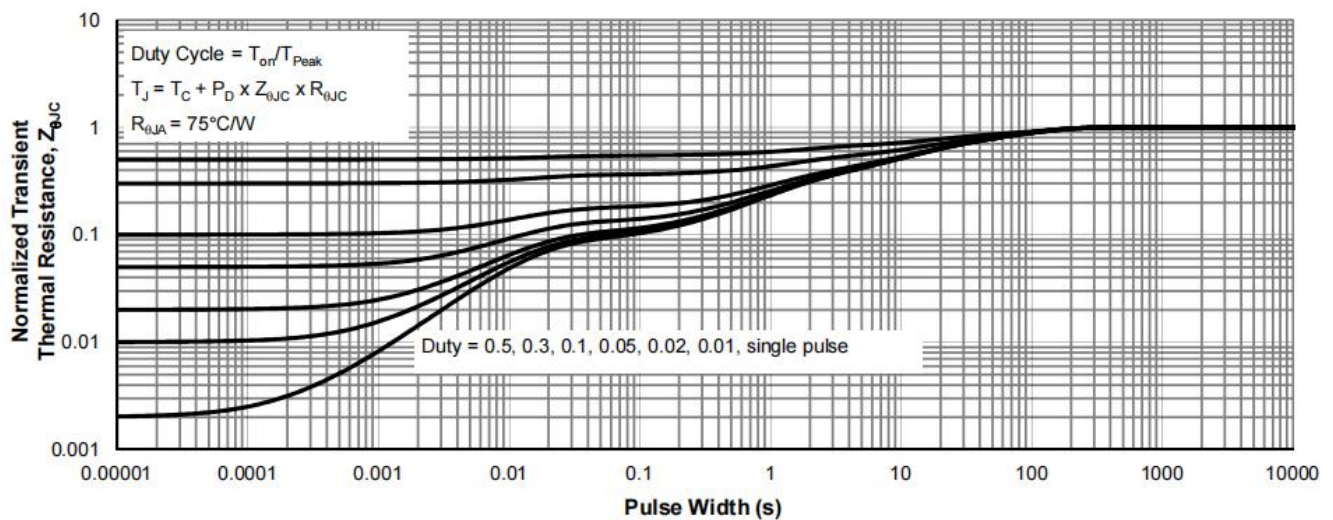
Power De-rating



Maximum Safe Operating Area

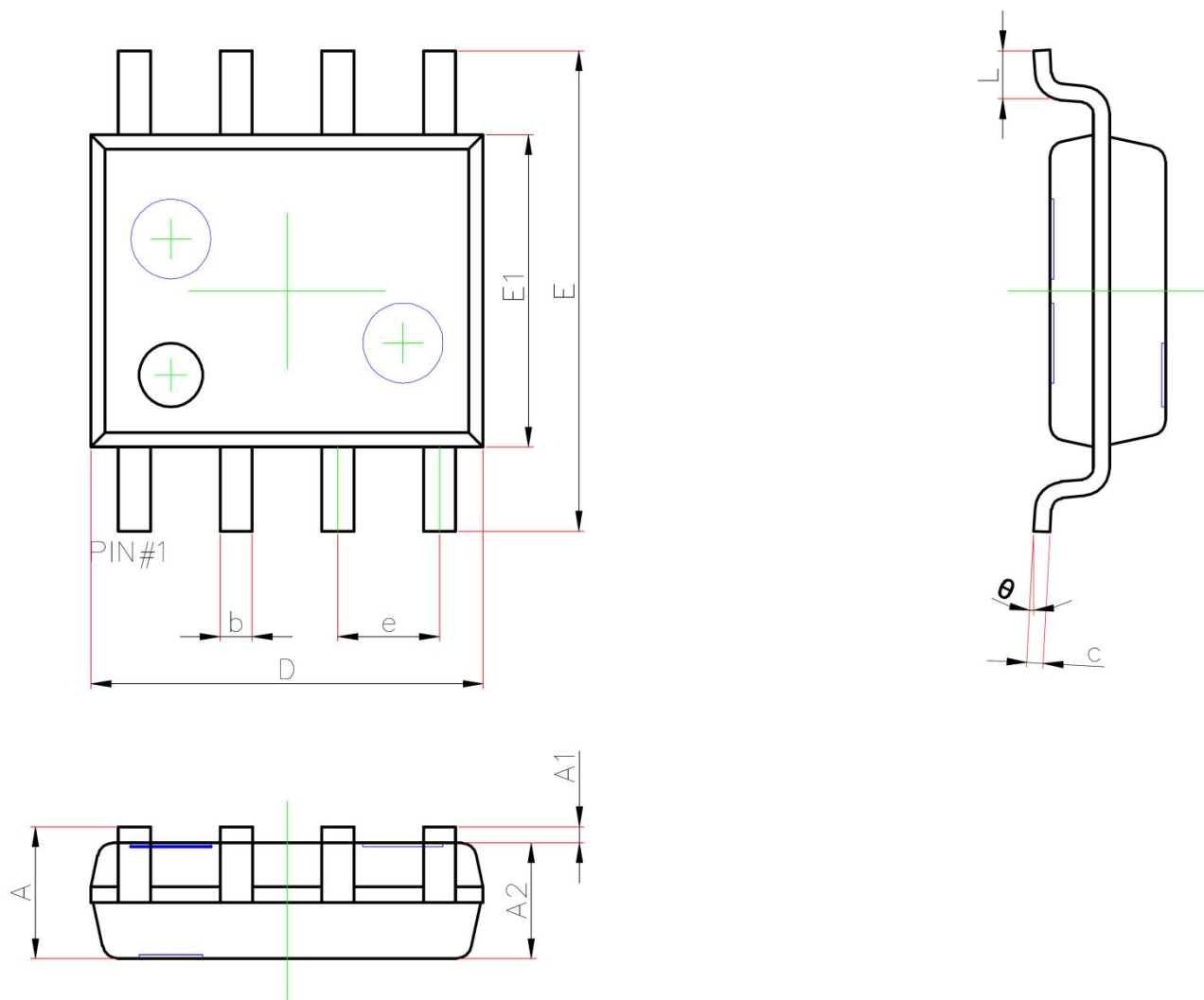


Single Pulse Power Rating, Junction-to-Case



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°