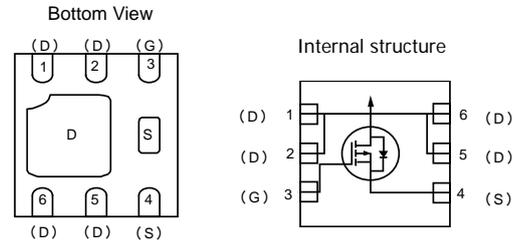


**PRIMARY CHARACTERISTICS**

$V_{DS}(V)$	$R_{DS(on)}(m\Omega)$	$I_D(A)$
-20	14@ $V_{GS}=-4.5V$	-10

**DFN2\*2-6L PACKAGE**

**FEATURES**

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

**MECHANICAL DATA**

- Case : Molded plastic,DFN2\*2-6L
- Polarity : Shown above
- Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026
- Epoxy : UL94-V0 rated flame retardant

**Absolute maximum rating@25°C**

Rating	Symbol	Value	Units	
Drain-Source Voltage	$V_{DS}$	-20	V	
Gate-Source Voltage	$V_{GS}$	$\pm 12$	V	
Drain Current	Continuous $T_A=25^\circ C$	$I_D$	-10	A
	Pulsed $T_A=70^\circ C$	$I_D$	-40	A
Total Power Dissipation	$T_A=25^\circ C$	$P_D$	2.4	W
	$T_A=125^\circ C$	$P_D$	0.9	W
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ C$	

**Thermal Characteristics**

Parameter	Symbol	Max.	Units
Thermal Resistance, Junction to Ambient (Note 1a)	$R_{\theta JA}$	52	$^\circ C/W$
Thermal Resistance, Junction to Ambient (Note 1b)	$R_{\theta JA}$	145	
Thermal Resistance, Junction to Case	$R_{\theta JC}$	6.9	

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Drain-Source Breakdown Voltage	$BV_{DSS}$	$I_D = -250\mu A, V_{GS} = 0V$	-20	-	-	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = -16V, V_{GS} = 0V$	-	-	-1.0	$\mu A$
Gate-to-Source Forward Leakage	$I_{GSS}$	$V_{GS} = \pm 10V$	-	-	$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.5	-0.9	-1.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -10A$	-	14	17	m $\Omega$
		$V_{GS} = -2.5V, I_D = -8A,$	-	18	25	m $\Omega$
		$V_{GS} = -1.8V, I_D = -3A,$	-	26	50	m $\Omega$
Forward Trans conductance	$g_{FS}$	$V_{DS} = -5V, I_D = -10A$	-	45	-	S
Total Gate Charge	Qg	$I_D = -10A, V_{DD} = -6V,$ $V_{GS} = -4.5V$	-	37	45	nC
Gate-to-Source Charge	Qgs		-	6.5		
Gate-to-Drain(Miller) Charge	Qgd		-	2.5		
Input Capacitance	$C_{ISS}$	$V_{GS} = 0V, V_{DS} = -15V,$ $f = 1MHz$	-	4540		pF
Output Capacitance	$C_{DSS}$		-	1100		pF
Reverse Transfer Capacitance	$C_{RSS}$		-	810		pF
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -6.0V, I_D = -10A,$ $V_{GS} = -4.5V, R_{GEN} = 6\Omega,$	-	40	60	ns
Rise Time	$t_r$		-	40	60	
Turn-Off Delay Time	$t_{d(off)}$		-	170	270	
Fall Time	$t_f$		-	90	150	
Source to Drain Diode Forward Voltage	$V_{SD}$	$V_{GS} = 0V, I_S = -2A$		-0.6	-1.2	V
		$V_{GS} = 0V, I_S = -10A$		-0.8	-1.2	

**Typical Characteristics**

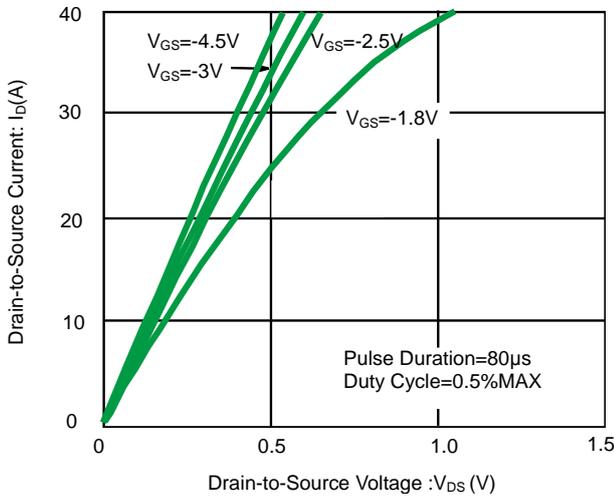


Fig 1. On-Region Characteristics

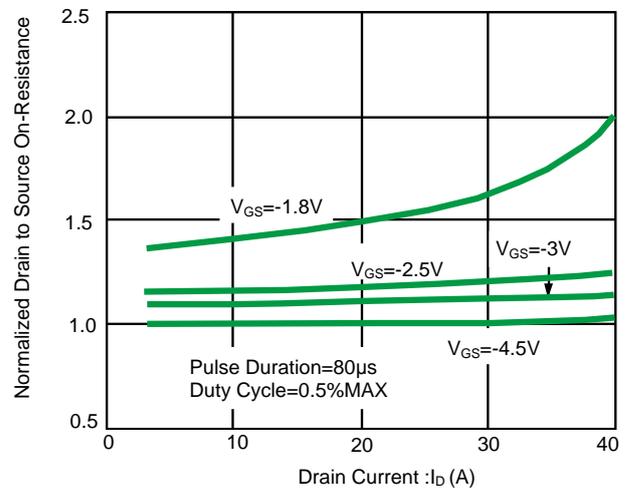


Fig 2. Normalized On-Resistance vs. Drain Current and Gate Voltage

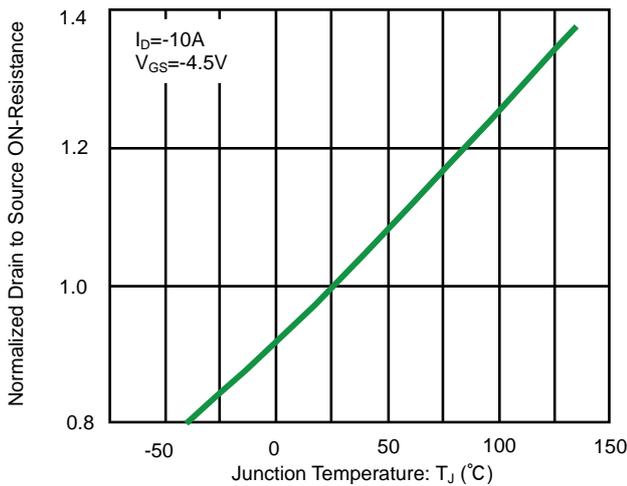


Fig 3. Normalized On-Resistance vs. Junction Temperature

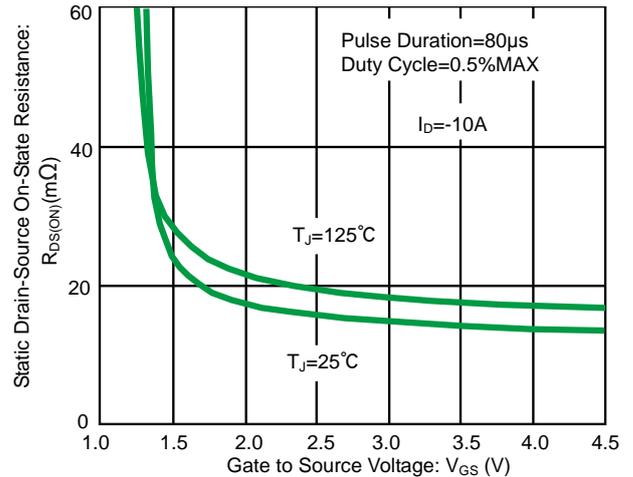


Fig 4. On-Resistance vs. Gate to Source Voltage

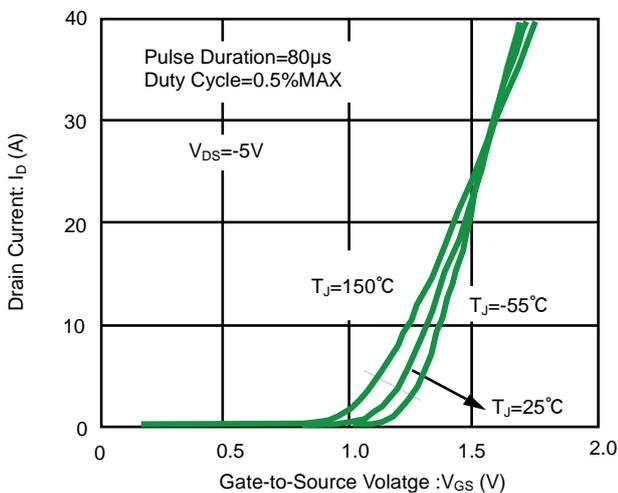


Fig 5. Transfer Characteristics

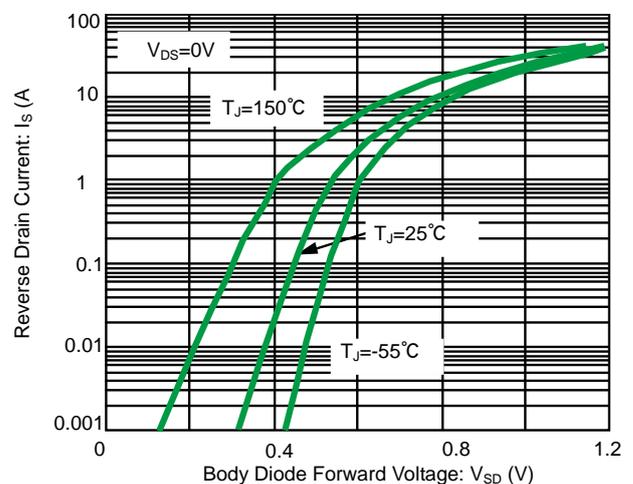


Fig 6. Source to Drain Diode Forward Voltage vs. Source Current

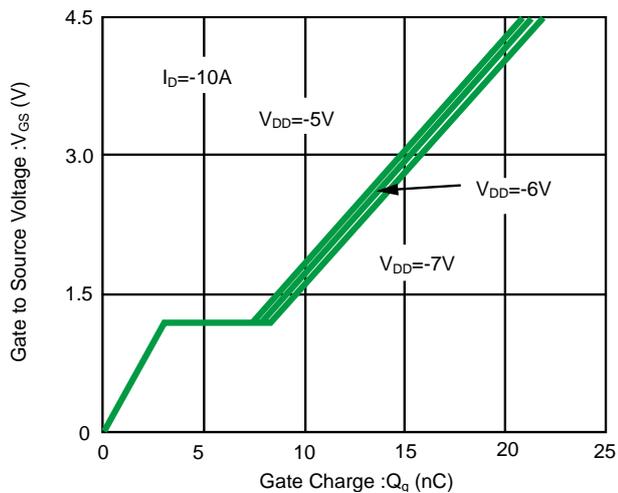


Fig 7. Gate Charge Characteristics

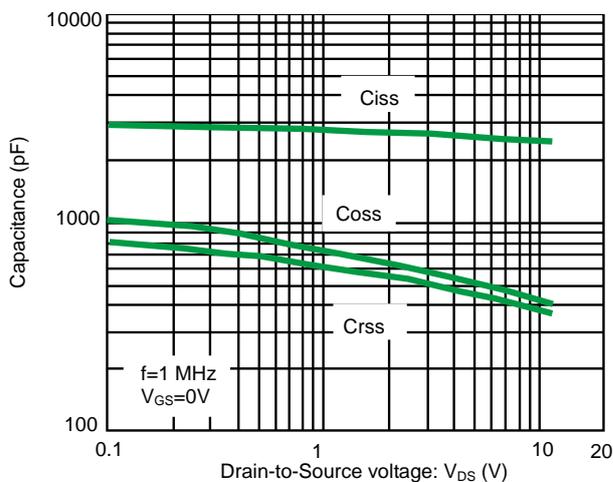


Fig 8. Capacitance vs. Drain to Source Voltage

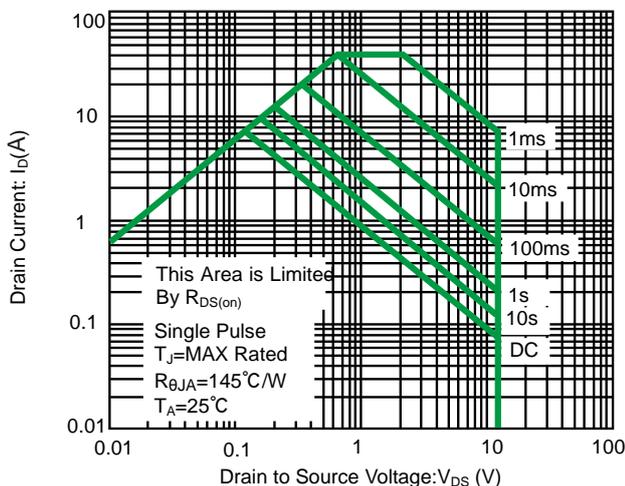


Fig 9. Forward Bias Safe Operating Area

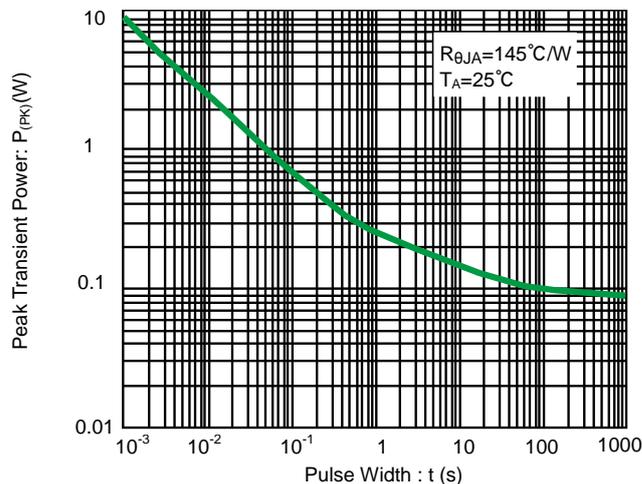


Fig 10. Single Pulse Maximum Power Dissipation

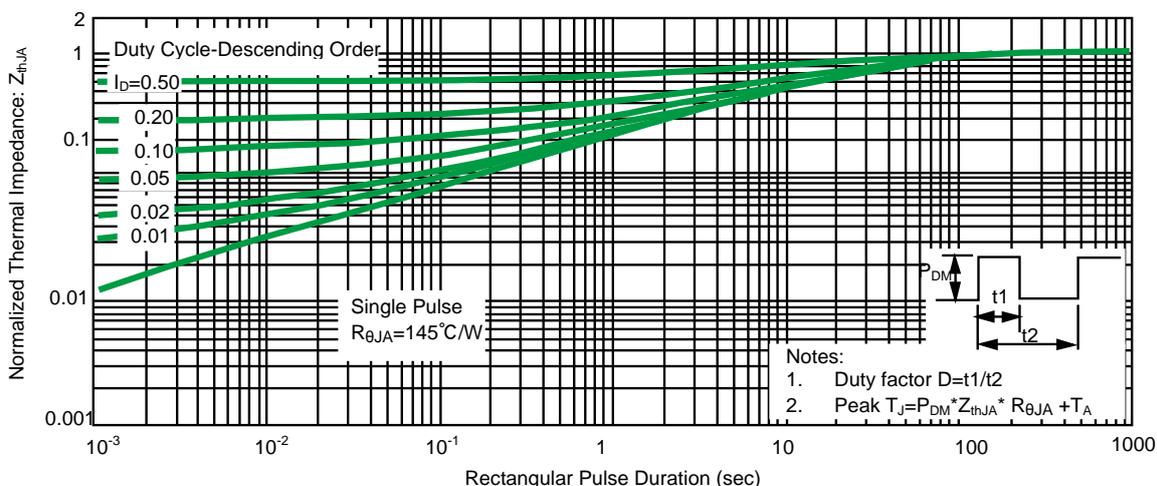
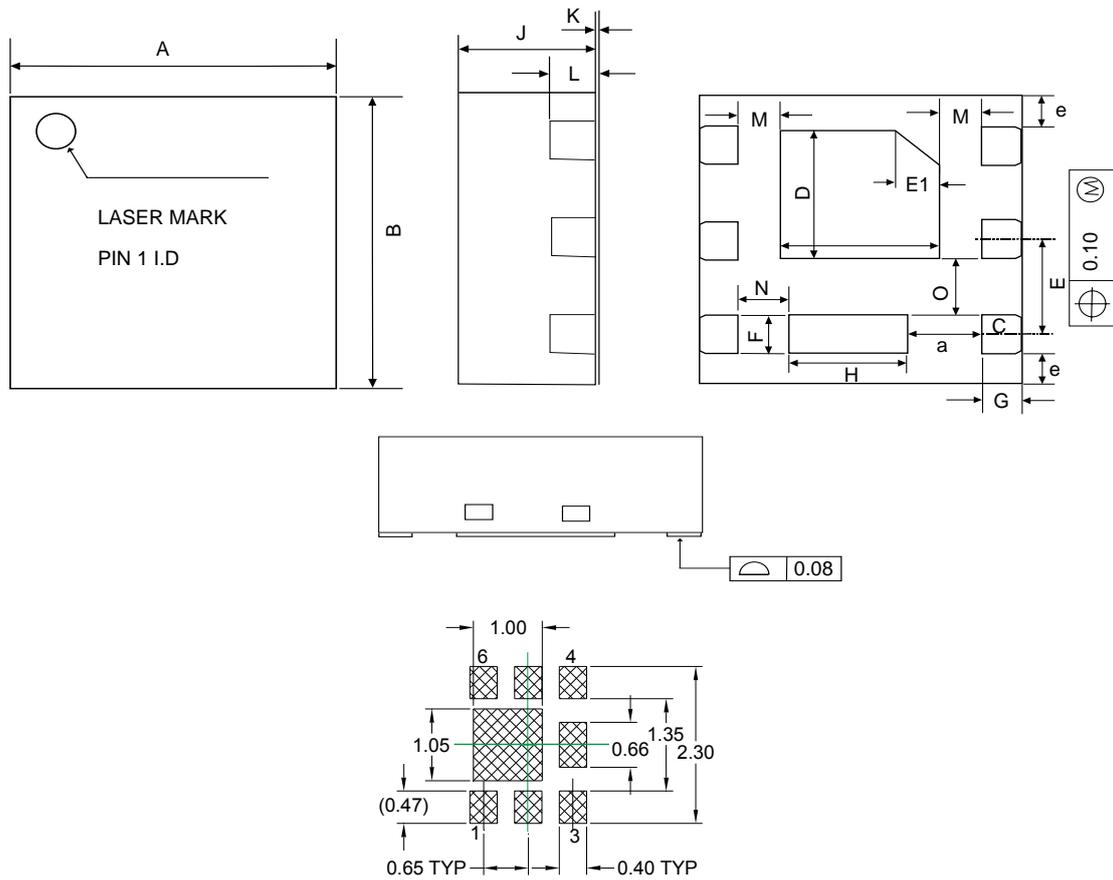


Fig 11. Transient Thermal Response Curve, Junction-to-Ambient

**Product dimension (DFN2\*2-6L)**


Dim	Millimeters	
	MIN	MAX
A	1.90	2.10
B	1.90	2.10
C	0.90	1.10
D	0.80	1.00
E	0.55	0.75
E1	0.25 Ref.	
F	0.25	0.35
G	0.20	0.30
H	0.65	0.85
J	0.70	0.80
K	0.00	0.05
L	0.20 Ref.	
M	0.15	--
N	0.20	--
O	0.25	--
a	0.45	0.65
e	0.125	

**Ordering Information:**

Device PN	Packing
PPM6N20V10 -T <sup>(1)</sup> H <sup>(2)</sup> -WS	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix "H"

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