

Descriptions

This is P-Channel Enhancement MOS in a DFN2×2B-6L Plastic Package

Features

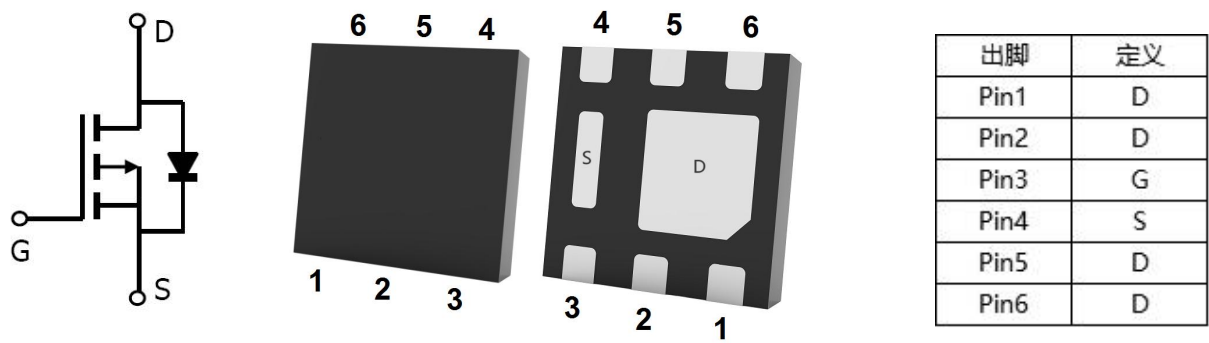
HF Product

Parameter	Value	Unit
V_{DS}	-16	V
$R_{DS(ON)MAX. V_{GS}=-4.5V}$	15	mΩ
$R_{DS(ON)MAX. V_{GS}=-2.5V}$	25	mΩ
I_D	-12	A

Applications

- Power Management in Notebook computer
- Portable Equipment
- Battery powered systems

Equivalent Circuit & Pinning



DFN2×2B-6L

Absolute Maximum Ratings(Ta=25°C)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-16	V
Gate-Source Voltage		V_{GS}	± 10	V
Continuous Drain Current		I_D (Ta=25°C)	-12	A
Pulsed Drain Current		I_{DM}	-42	A
Power Dissipation for Single Operation		P_D (Ta=25°C)	3.0	W
Maximum Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55 ~ 150	°C
Thermal Resistance-Junction to Ambient	$t \leq 10s$	$R_{\theta JA}$	41.7	°C/W
	Steady State		75	°C/W

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$I_D = -250 \mu A$ $V_{GS} = 0V$	-16	-19		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -16V$ $V_{GS} = 0V$			-1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS} = 0V$ $V_{GS} = \pm 10V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$ $I_D = -250 \mu A$	-0.3	-0.7	-1.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -4.5V$ $I_D = -10A$		13	15	m Ω
		$V_{GS} = -2.5V$ $I_D = -5A$		18	25	
Diode Forward Voltage	V_{SD}	$I_S = -1A$ $V_{GS} = 0V$			-1.2	V
Gate resistance	R_g	$V_{GS} = 0V$, $V_{DS} = 0V$, $f = 1MHz$		10		
Input Capacitance	C_{iss}	$V_{GS} = 0V$ $V_{DS} = -8V$ $f = 1MHz$		1750		pF
Output Capacitance	C_{oss}			300		
Reverse Transfer Capacitance	C_{rss}			250		
Total Gate Charge	Q_g	$V_{GS} = -4.5V$ $V_{DS} = -6V$ $I_D = -10A$		13		nC
Gate-Source Charge	Q_{gs}			1.9		
Gate-Drain Charge	Q_{gd}			3.5		

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-on Delay Time	$t_{d(ON)}$	$V_{GS}=-4.5V$ $V_{DS}=-6V$ $R_L=0.75\Omega$ $R_{GEN}=3\Omega$		11.3		ns
Turn-on Rise Time	t_r			25.4		
Turn-off Delay Time	$t_{d(OFF)}$			72		
Turn-off Fall Time	t_f			43.5		

Electrical Characteristic Curve

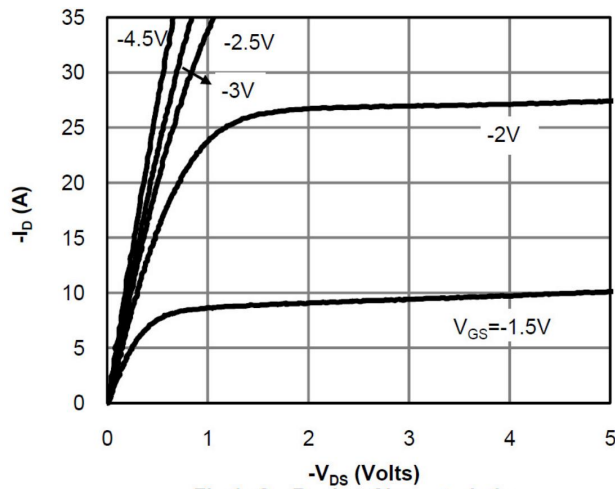


Fig 1: On-Region Characteristics

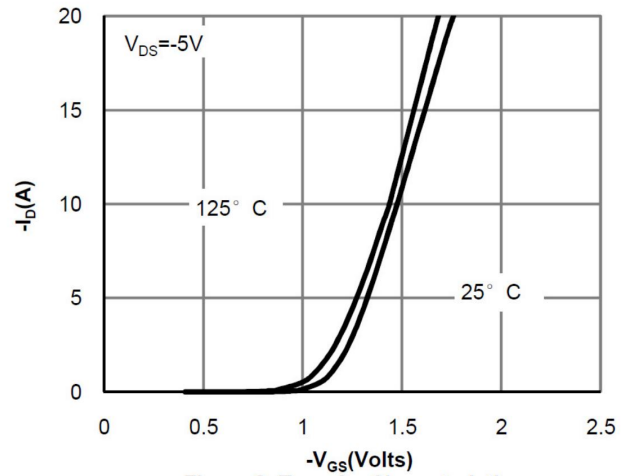


Figure 2: Transfer Characteristics

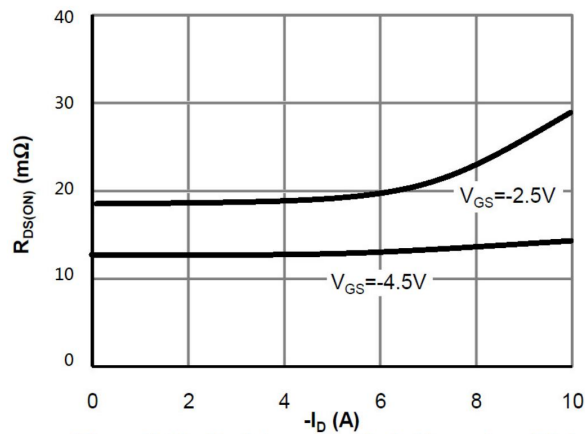


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

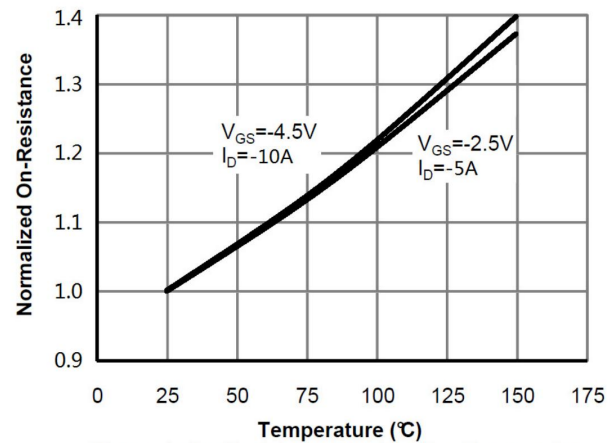


Figure 4: On-Resistance vs. Junction Temperature

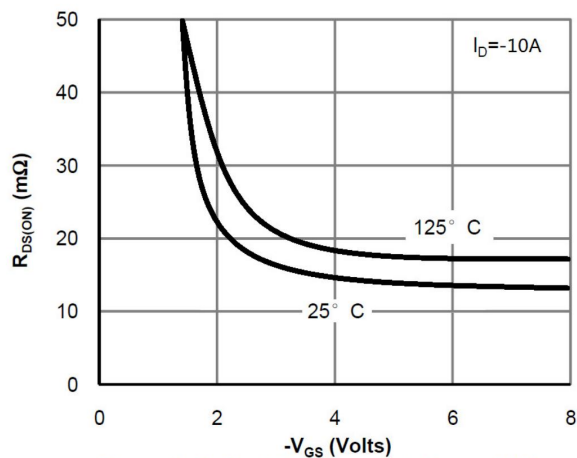


Figure 5: On-Resistance vs. Gate-Source Voltage

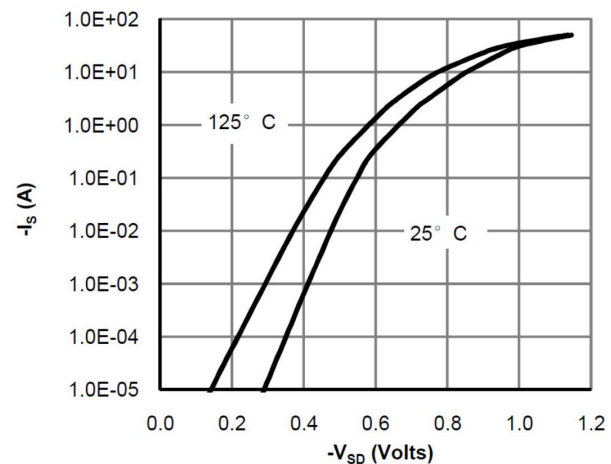


Figure 6: Body-Diode Characteristics

Electrical Characteristic Curve

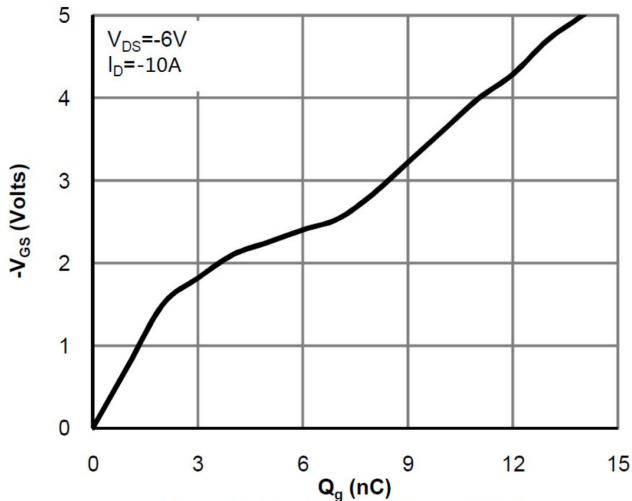


Figure 7: Gate-Charge Characteristics

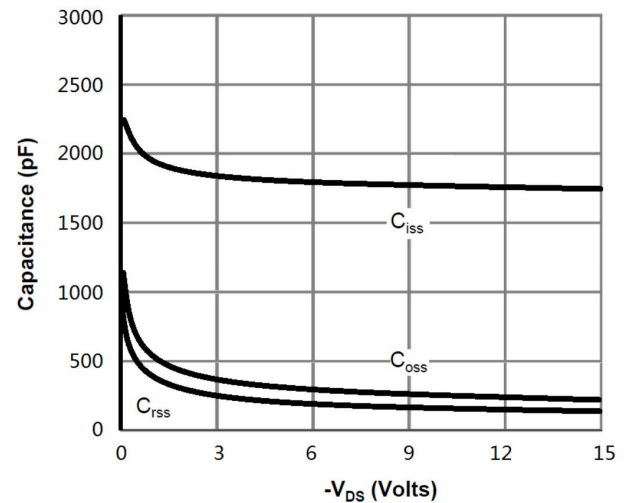


Figure 8: Capacitance Characteristics

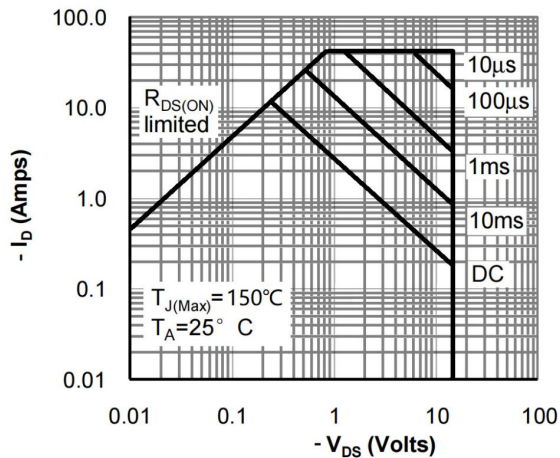


Figure 9: Maximum Forward Biased Safe Operating Area

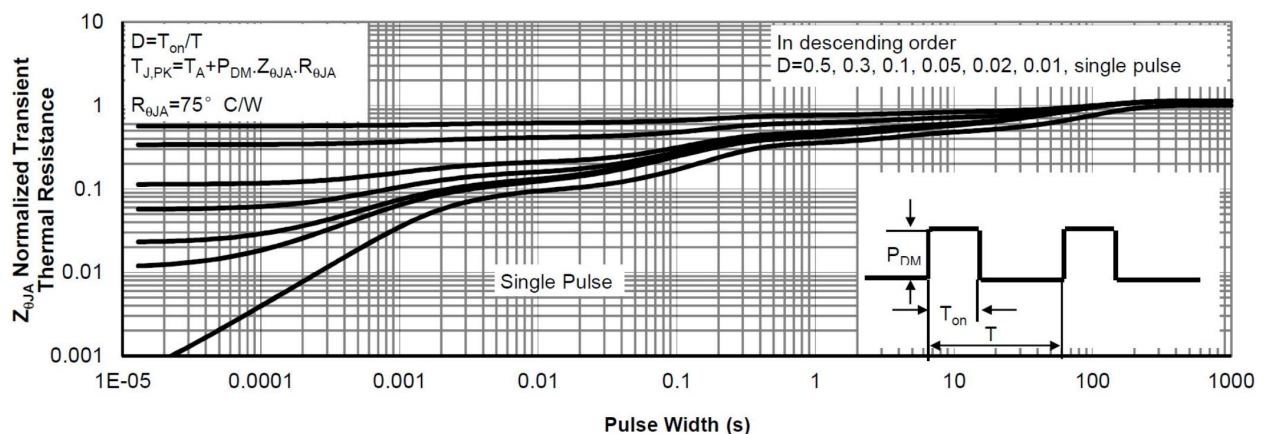


Figure 10: Normalized Maximum Transient Thermal Impedance

Marking Instructions



Note:

COT: Company Code

150P016: Product Type Code

****: Lot No. Code, code change with Lot No

Packaging SPEC

REEL

Package Type	Units					Dimension (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
DFN2×2B-6L	4,000	10	40,000	4	160,000	7" ×8	210×205×205	445×435×230

Package Outline Dimensions

DFN2 X2B-6L-0.5

Unit:mm

