/ Descriptions

/ Features

V_{DS} (V) = -16V I_D = -12A

$R_{DS(ON)}$@-4.5V ≤ 14mΩ(Type.12.6mΩ)

$R_{DS(ON)}$@-2.5V ≤ 25mΩ(Type.17.0mΩ)

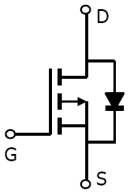
$R_{DS(ON)}$@-1.8V ≤ 100mΩ(Type.23.5mΩ)

HF Product.

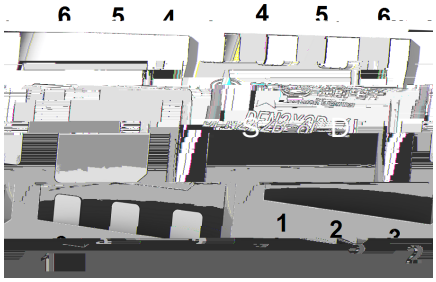
/ Applications

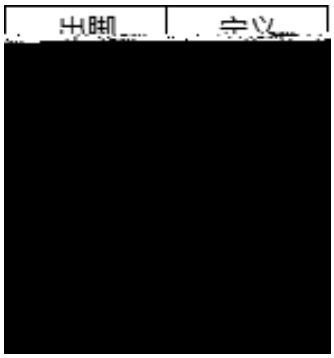
Power Management in Notebook computer, Portable Equipment and Battery powered systems.

/ Equivalent Circuit



/ Pinning





/ Marking

See Marking Instructions.

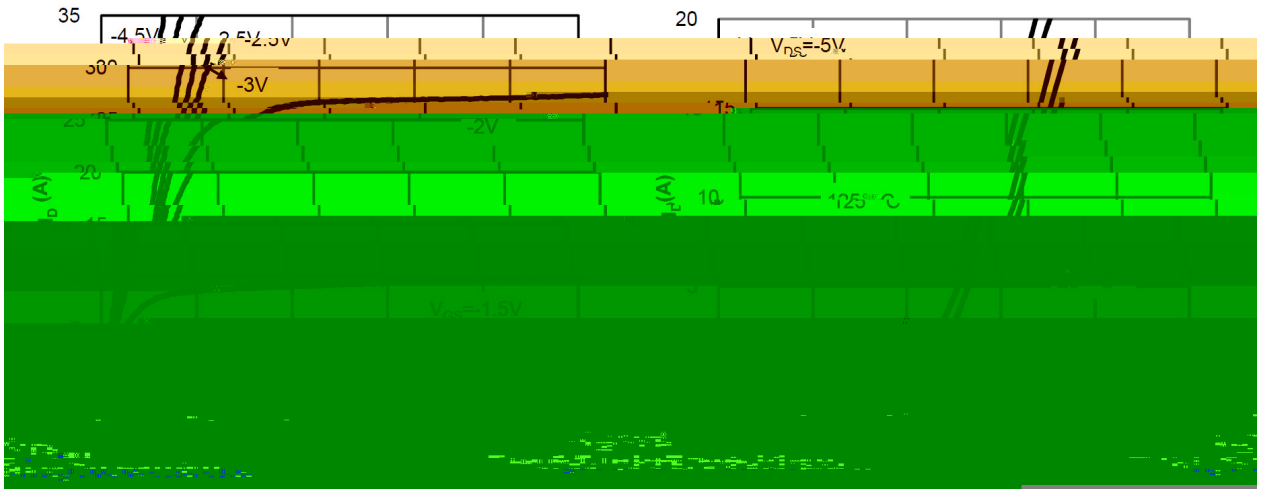
/ Absolute Maximum Ratings(Ta=25)

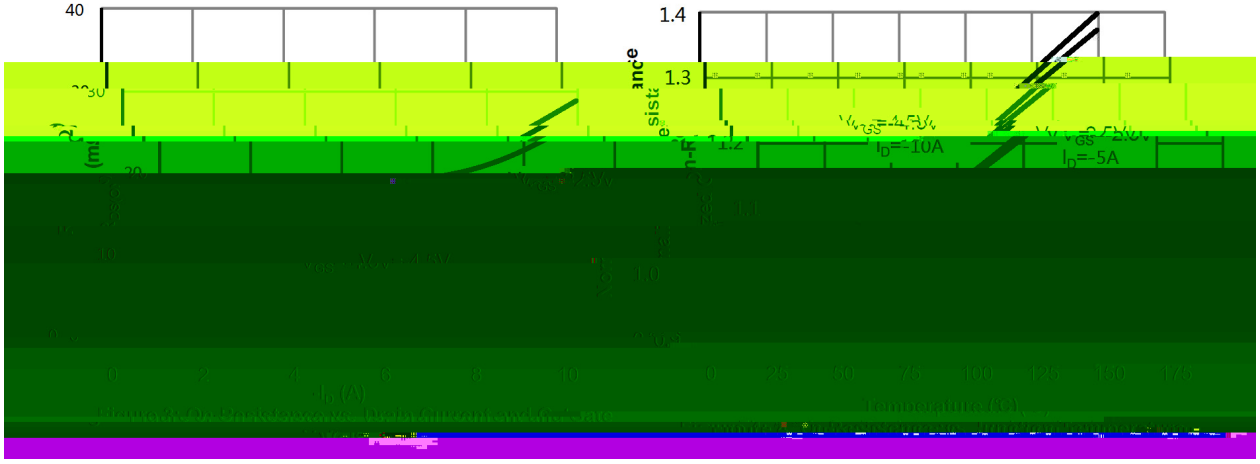
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-16	V
Gate-Source Voltage	V_{GSS}	±10	V
Continuous Drain Current	I_D	-12	A
Pulsed Drain Current	I_{DM}	-42	A
Power Dissipation for Single Operation	P_D	3.0	W
Maximum Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	41.7	/W

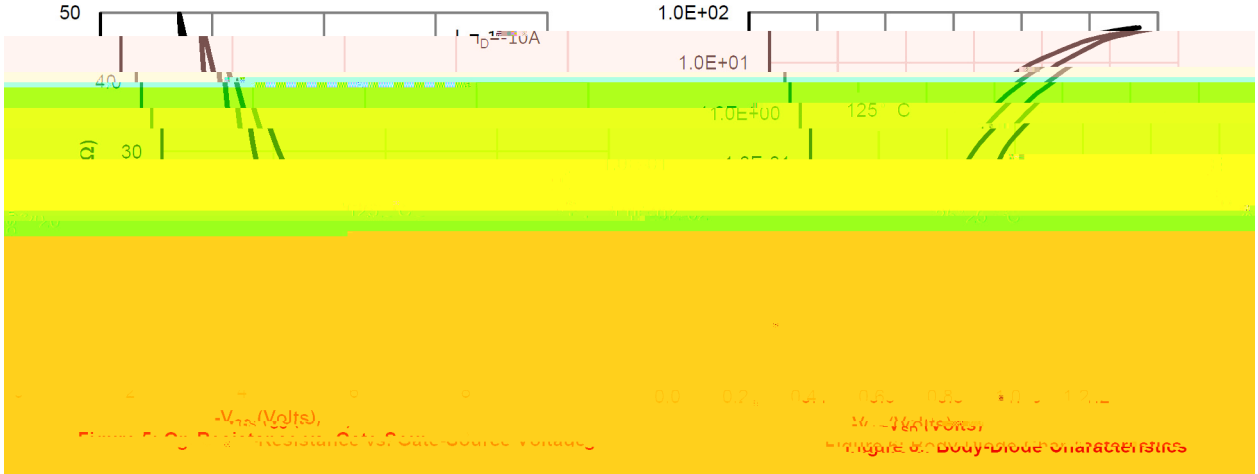
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=-250μA 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}=±10V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=VGS I_D=-250μA	-0.3	-0.7	-1.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-4.5V I_D=-10A		12.6	14	mΩ
		V_{GS}=-2.5V I_D=-5A		17.0	25	
		V_{GS}=-1.8V I_D=-5A		23.5	100	
Diode Forward Voltage	V_{SD}	I_S=-1A V_{GS}=0V			-1.2	V
Gate resistance	Rg	V_{GS}=0V, V_{DS}=0V, f=1MHz		10.3		Ω
Input Capacitance	C_{iss}	V_{GS}=0V V_{DS}=-8V f=1MHz		1365		pF
Output Capacitance	C_{oss}			220		
Reverse Transfer Capacitance	C_{rss}			180		
Total Gate Charge	Q_g	V_{GS}=-4.5V V_{DS}=-10V I_D=-8A		14.1		nC
Gate-Source Charge	Q_{gs}			1.3		
Gate-Drain Charge	Q_{gd}			3.1		
Turn-on Delay Time	$t_{d(ON)}$	V_{GS}=-4.5V V_{DS}=-10V I_D=-8A R_g=3		12.2		ns
Turn-on Rise Time	t_r			60.6		
Turn-off Delay Time	$t_{d(OFF)}$			68.6		
Turn-off Fall Time	t_f			41.7		

/ Electrical Characteristic Curve







/ Electrical Characteristic Curve

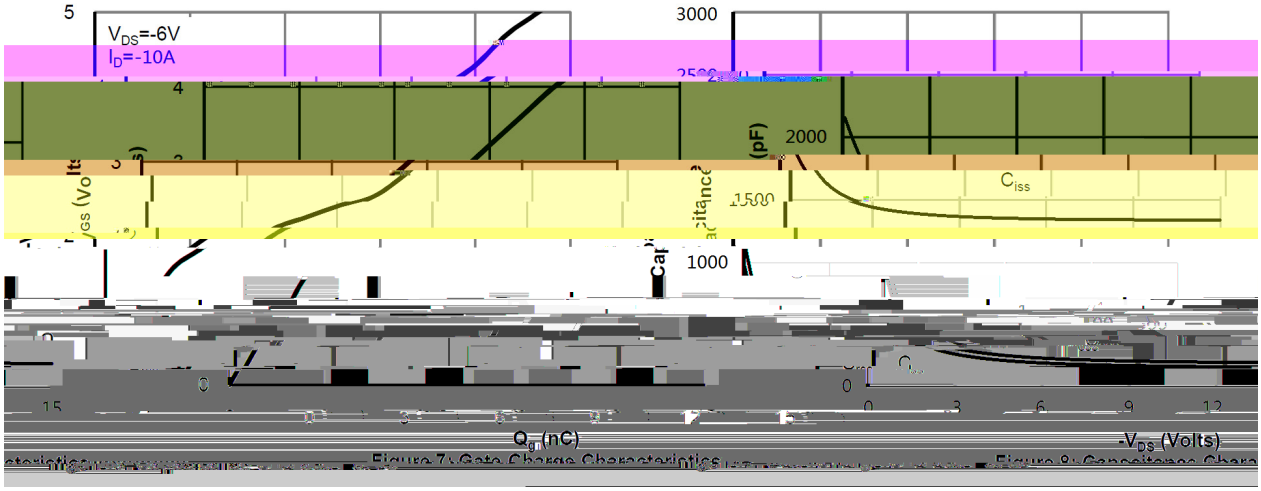


Figure 7. Gate Charge Characteristics

Figure 8. Capacitance Chara

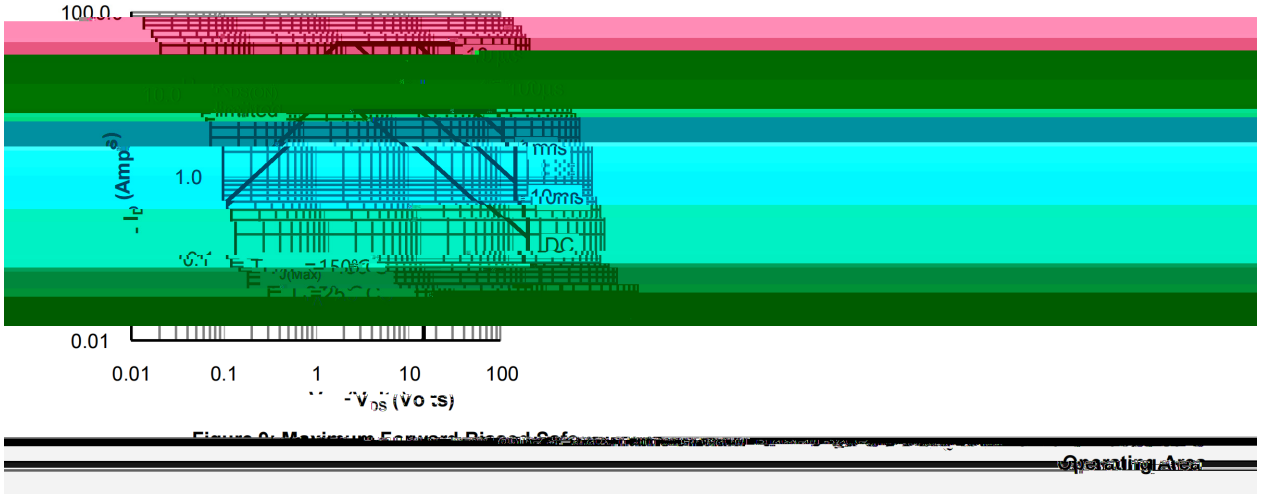
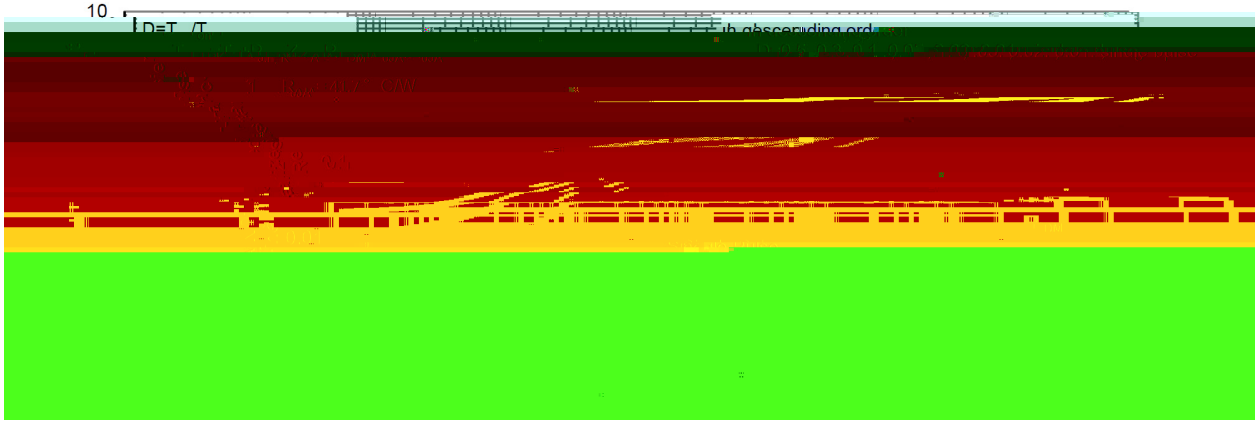
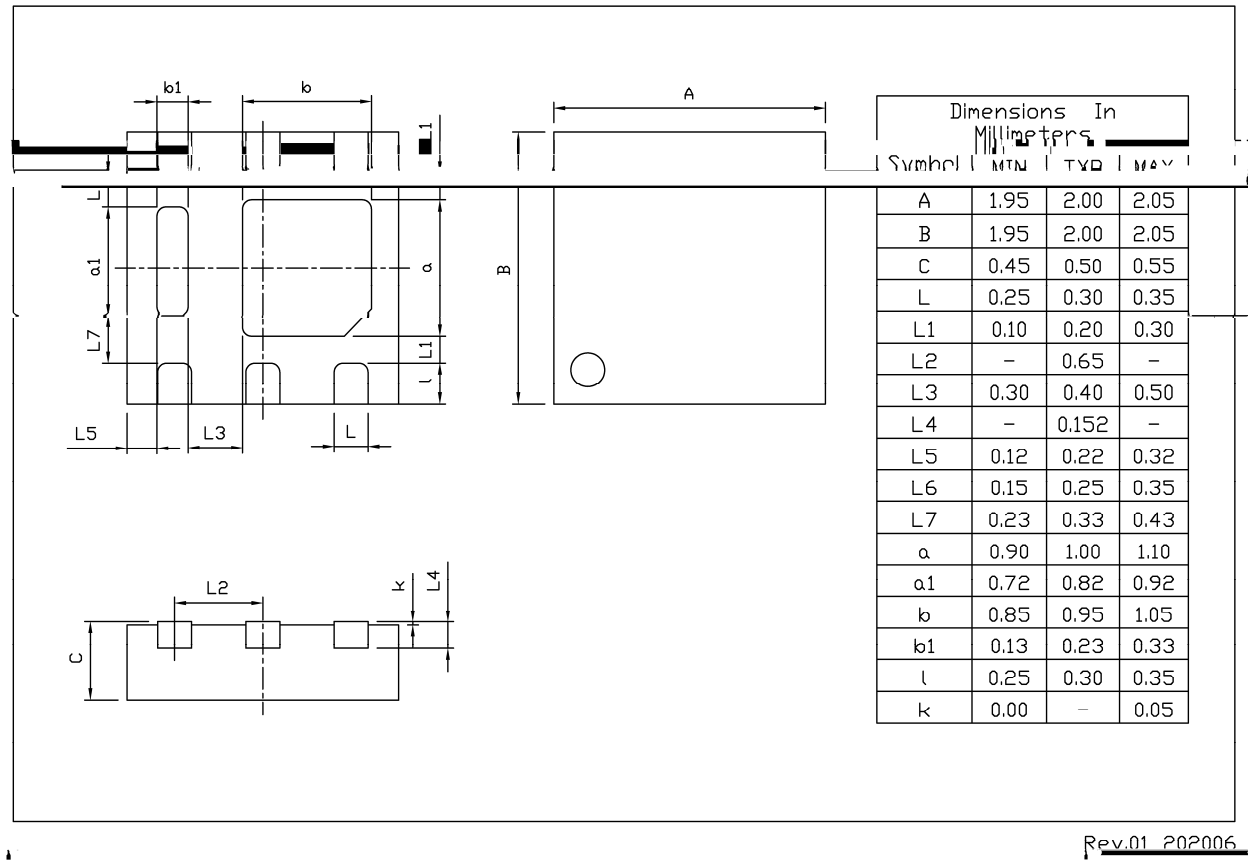


Figure 9. Maximum Forward Biased Safe Operating Area



/ Package Dimensions

DFN2×2B-6L-0.5 Unit:mm



Dimensions In Millimeters			
Symbol	MIN	TYP	MAX
A	1.95	2.00	2.05
B	1.95	2.00	2.05
C	0.45	0.50	0.55
L	0.25	0.30	0.35
L1	0.10	0.20	0.30
L2	–	0.65	–
L3	0.30	0.40	0.50
L4	–	0.152	–
L5	0.12	0.22	0.32
L6	0.15	0.25	0.35
L7	0.23	0.33	0.43
a	0.90	1.00	1.10
a1	0.72	0.82	0.92
b	0.85	0.95	1.05
b1	0.13	0.23	0.33
l	0.25	0.30	0.35
K	0.00	–	0.05

Rev.01 202006

/ Marking Instructions

BR

130P016

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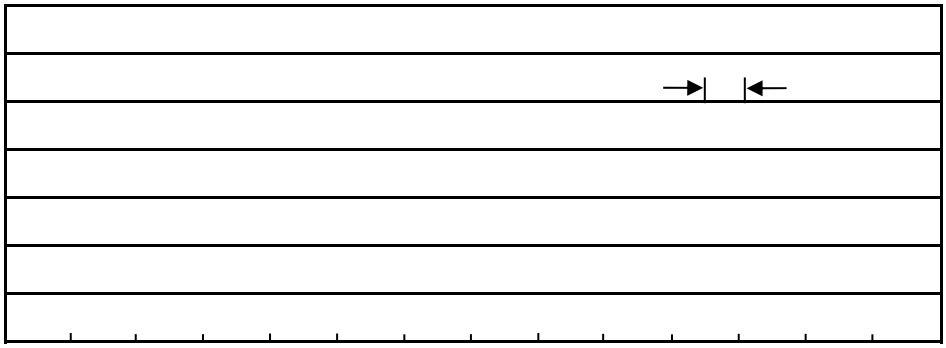
Note:

BR:	Company Code
130P016:	Product Type Code
****:	Lot No. Code, code change with Lot No

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



		Note:
1	150 180 60 90sec;	1.Preheating:150~180 , Time:60~90sec.
2	245 5 5 0.5sec;	2.Peak Temp.:245 5 , Duration:5 0.5sec.
3	2 10 /sec.	3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260 5	10 1 sec.	Temp.:260±5	Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension		(unit mm³)
	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

/ Notices

All information provided in this document is subject to legal disclaimers.