

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current	$I_D(T_C=25^\circ\text{C})$	325	A
	$I_D(T_C=100^\circ\text{C})$	325	A
Pulsed Drain Current	I_{DM}	1300	A
Gate-Source Voltage	V_{GS}	± 20	V
Single Pulsed Avalanche Energy L=1.0mH	E_{AS}	1152	mJ
Continuous-Source Current	I_S	325	A
Total Power Dissipation	$P_D(T_C=25^\circ\text{C})$	375	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 175	
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	42	/W
Thermal Resistance-Junction to Case	$R_{\theta JC}$	0.4	

Notes:

Surface Mounted on 1 in² pad area, t ≤ 10 sec

Pulse width ≤ 300 μs, duty cycle ≤ 2 %

Limited by bonding wire

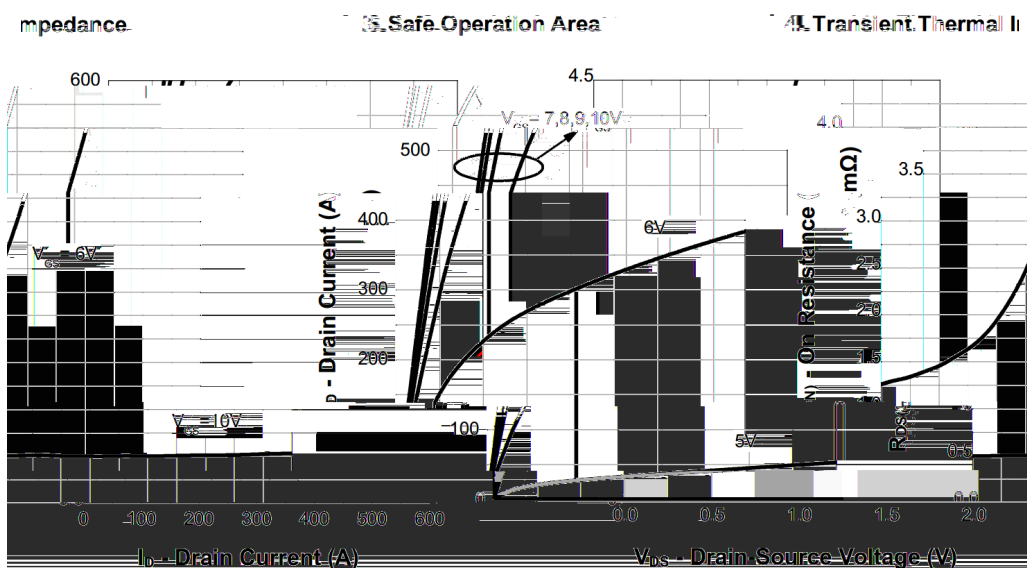
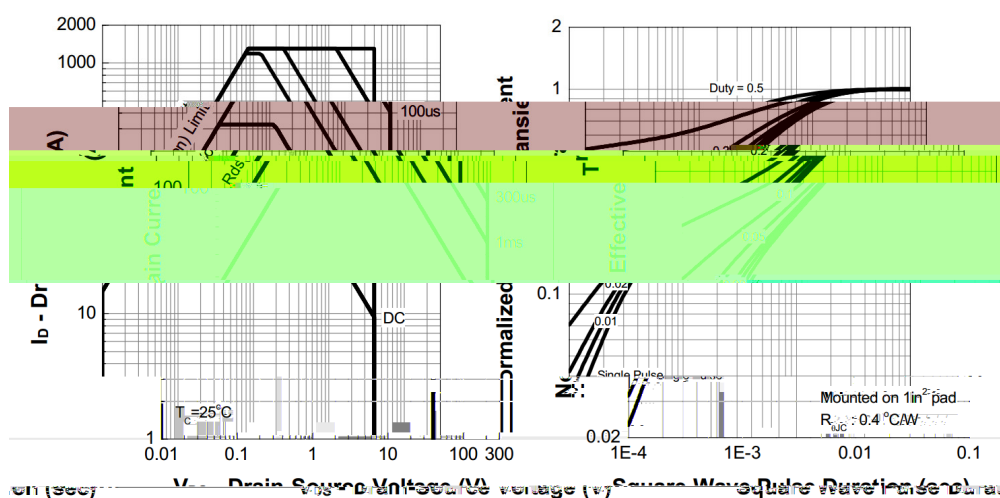
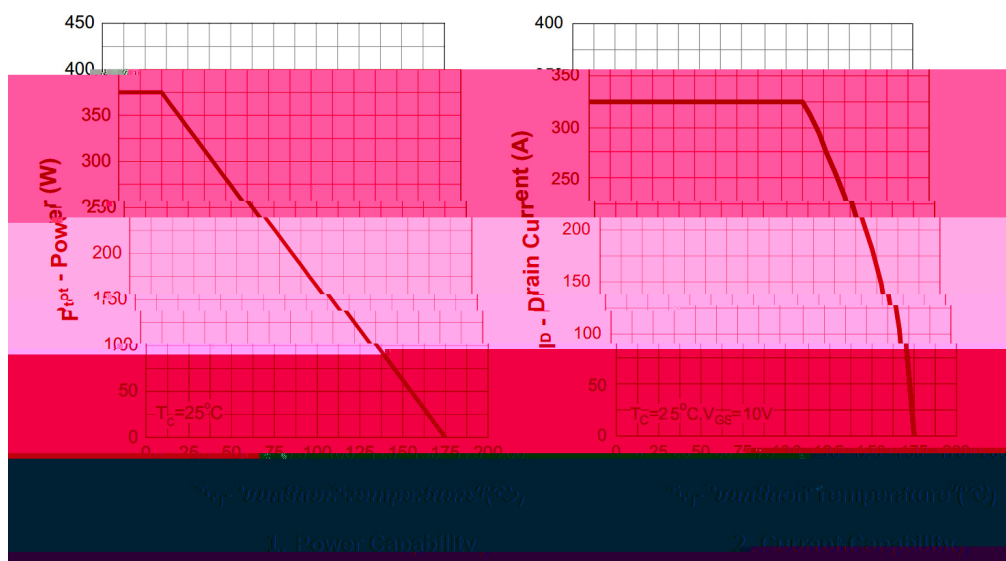
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	40			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=32V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=50A$		0.50	0.55	mΩ
	$R_{DS(on)}$	$V_{GS}=6V$ $I_D=30A$		1.42	1.65	mΩ
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=50A$			1.3	V
Reverse Recovery Time	t_{rr}	$I_{DS} = 45A, V_{GS} = 0V$ $dI_{SD}/dt = 100 A/\mu s$		76		nS
Reverse Recovery Charge	Q_{rr}			54		nC
Input Capacitance	C_{iss}	$V_{DS}=20V$ $V_{GS}=0V$ $f=1.0MHz$		7204		pF
Output Capacitance	C_{oss}			2944		
Reverse Transfer Capacitance	C_{rss}			147		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	$V_{GS}=10V,$ $I_D=50A$ $V_{DS}=20V,$		121		nC

48001 18.48 18.48 624.62 .13-.0e-7663ef513.06 424.62 .4804.0e-7663ef548.52 624.62 .13-.0e-7663ef5BT10.4958 0 0 10.5 55.98 3

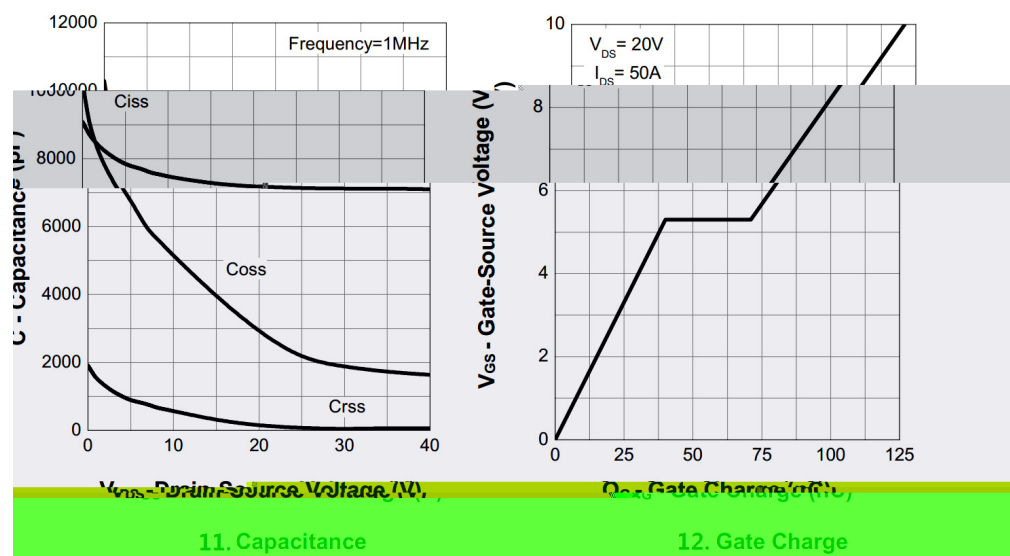
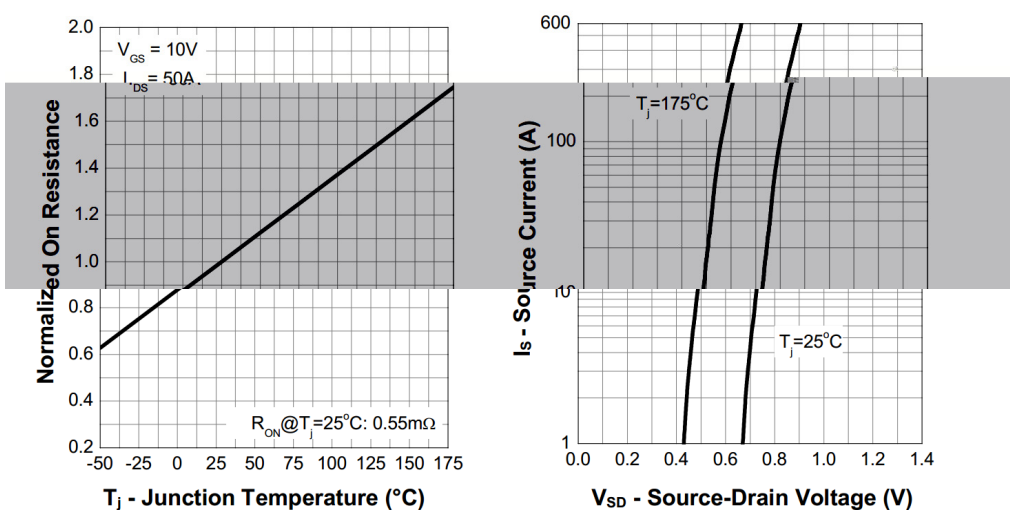
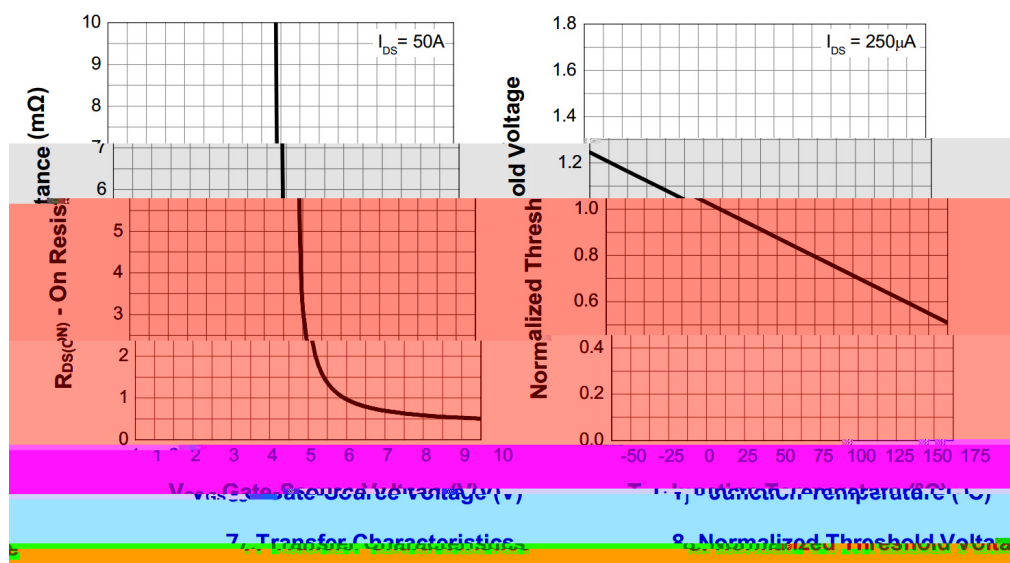
/ Electrical Characteristic Curve



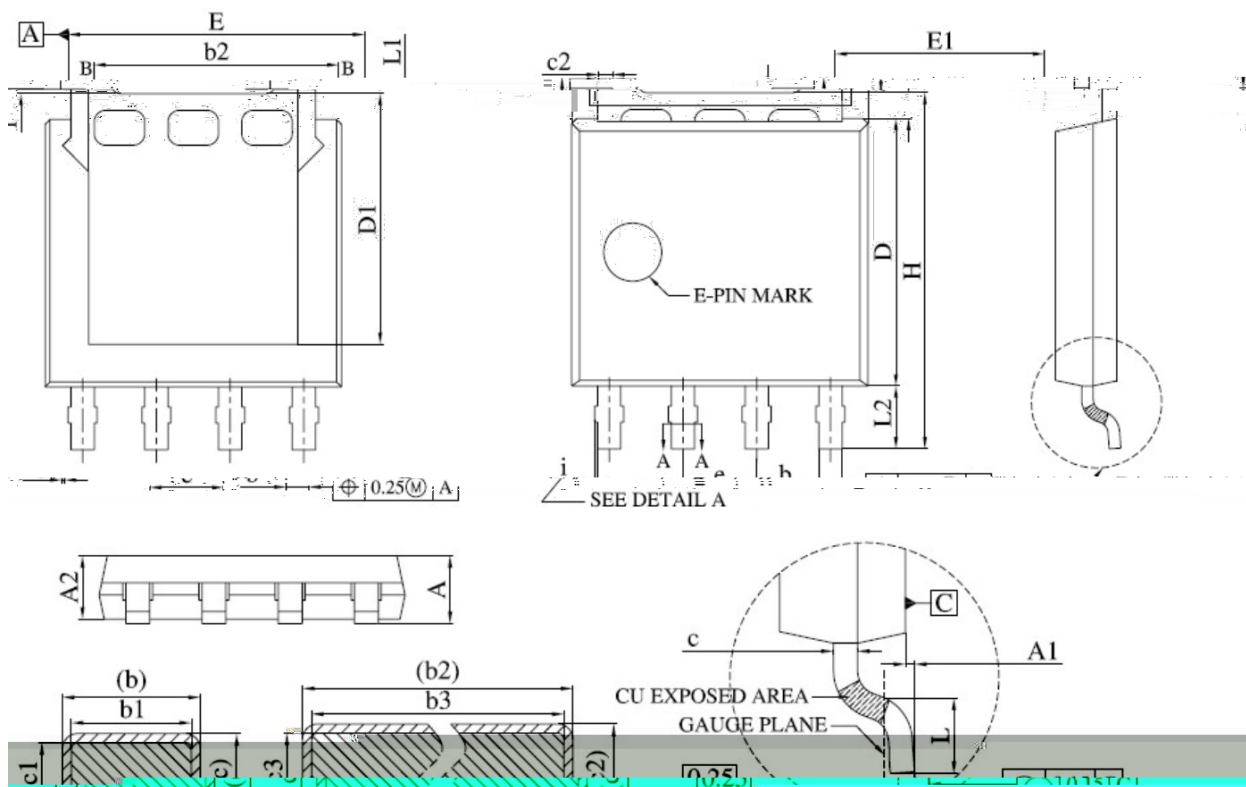
6. On Resistance

5. Output Characteristics

/ Electrical Characteristic Curve



/ Package Dimensions



Symbol	Dimensions In Millimeters	
	MIN.	MAX.
A	1.00	1.30
A1	0.00	0.15
A2	0.98	1.12
b	0.35	0.50
b1	0.32	0.46
b2	4.02	4.41
b3	4.00	4.37
c	0.19	0.25
c1	0.17	0.23
c2	0.24	0.30
D	4.45	4.70
D1	-	4.45

Symbol	Dimensions In Millimeters	
	MIN.	MAX.
E	4.95	5.20
E1	3.40	3.70
c	1.27 BSC.	
H	5.95	6.25
i	-	0.25
L	0.40	0.85
L1	0.22	0.57
L2	0.80	1.30
θ	0°	8°



/ Marking Instructions



BR

005N04SH

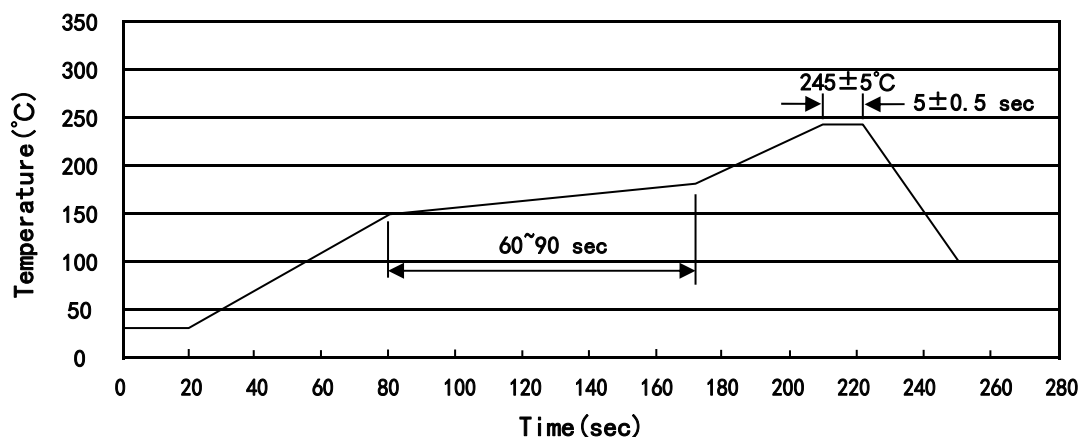
Note

BR: Company Code

005N04SH: 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 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
LFPK5×6	3,000	2	6,000	5	30,000	13"×12	356×335×50	385×285×358

Package Type	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
LFPK5×6	5,000	2	10,000	5	50,000	13"×12	356×335×50	385×285×358

/ Notices

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