LFPAK5×6 N

N-Channel MOSFET in a LFPAK5×6 Plastic Package.

V_{DS} (V) = 80V I_D =300A

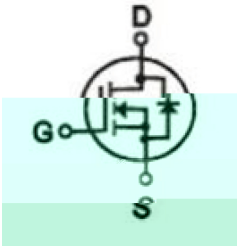
$R_{DS(ON)}$@10V ≤ 1.5mΩ(Typ. 1.3mΩ)

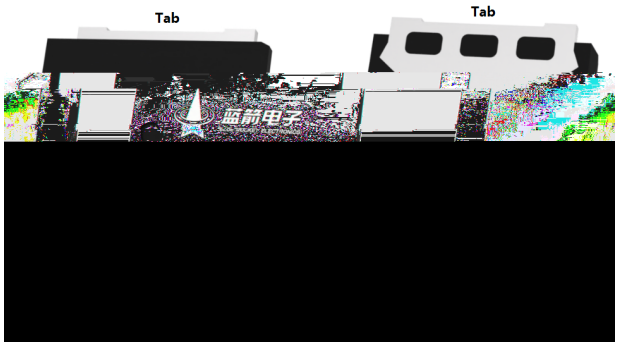
$R_{DS(ON)}$@6V ≤ 2.2mΩ(Typ. 1.9mΩ)

HF Product.

LCDM

LCD TV appliances, High power inverter system, LCDM appliances.





PIN1 2 3 S PIN4 G Tab D

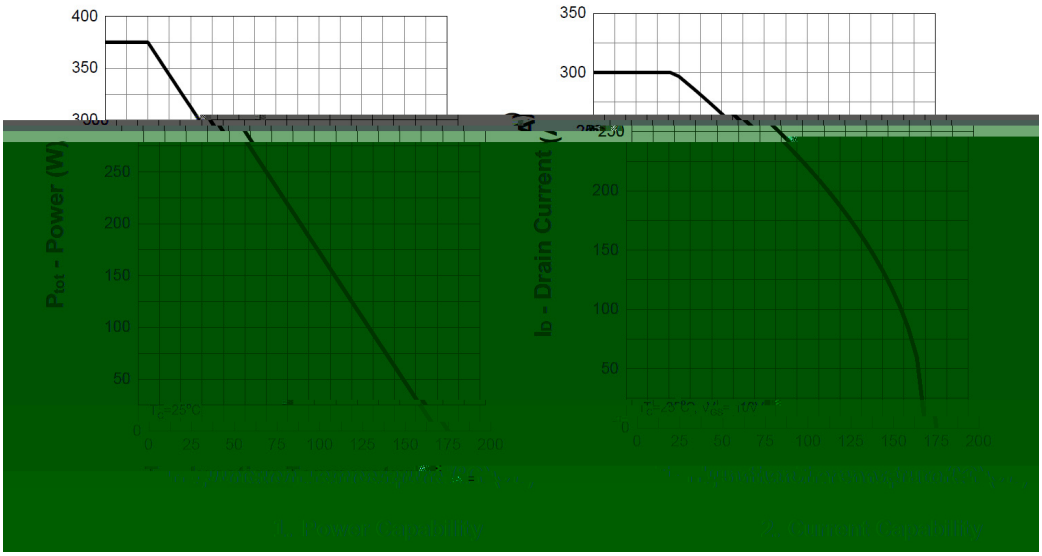
See Marking Instructions.

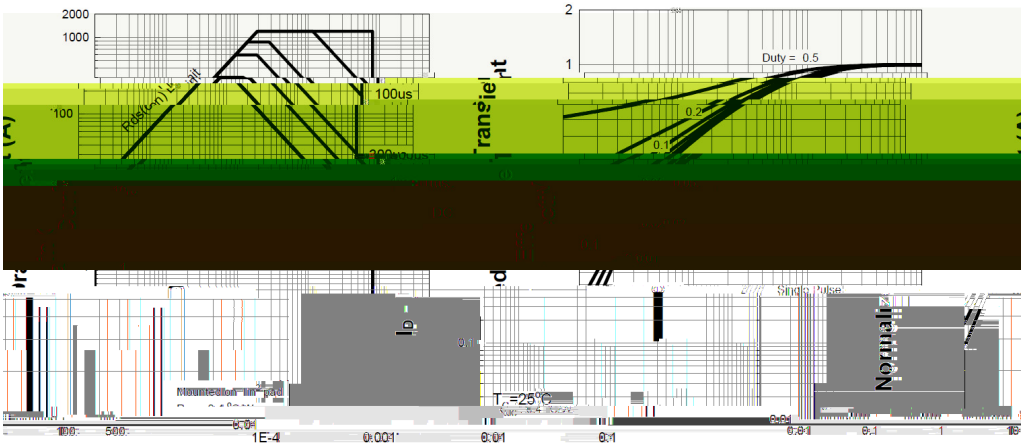
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	80	V
Drain Current	I_D(Tc=25)	300	A
	I_D(Tc=100)	229	A
Pulsed Drain Current ,	I_{DM}	1200	A
Gate-Source Voltage	V_{GS}	± 20	V
Single Pulsed Avalanche Energy L=1.0mH	E_{AS}	950	mJ
Continuous-Source Current	I_S(Tc=25)	300	A
Total Power Dissipation	P_D(Tc=25)	375	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to 175	℃
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	57	/W
Thermal Resistance-Junction to Case	$R_{\theta JC}$	0.4	

Notes:
① Surface Mounted on 1 in^2 pad area, t ≤ 10 sec
② Pulse width ≤ 300 μs, duty cycle ≤ 2 %
③ Limited by bonding wire

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	80			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=64V V_{GS}=0V			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=50A		1.3	1.5	mΩ
	$R_{DS(on)}$	V_{GS}=6V I_D=30A		1.9	2.2	
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=50A			1.3	V
Reverse Recovery Time	trr	I_{DS} = 50A, V_{GS} = 0 V dI$_{SD}$/dt = 100 A/μs		54		nS
Reverse Recovery Charge	Qrr			78		nC
Input Capacitance	C_{iss}	V_{DS}=40V V_{GS}=0V f=1.0MHz		7971		pF
Output Capacitance	C_{oss}			1112		
Reverse Transfer Capacitance	C_{rss}			53		

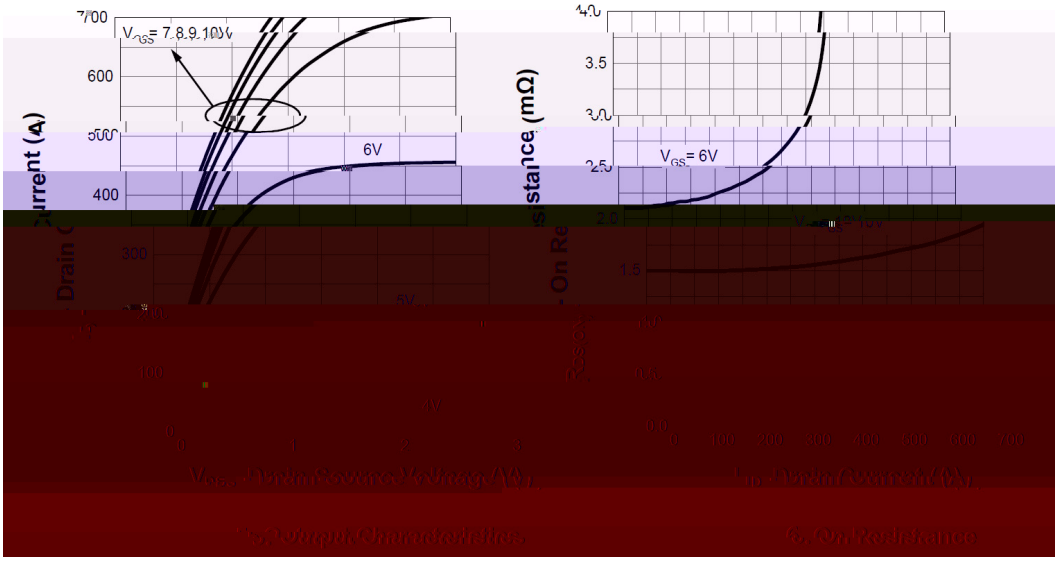
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	V_{GS}=10V, V_{DS}=40V, I_D=50A		141		nC
Gate Source Charge	Q_{gs}			40		
Gate Drain Charge	Q_{gd}			34		
Turn-On Delay Time	$t_{d(on)}$	V_{GEN}=10V V_{DS}=40V R_L=0.8Ω R_G=3.9Ω I_{DS}=50A		24		ns
Turn-On Rise Time	t_r			57		
Turn-Off Delay Time	$t_{d(off)}$			94		
Turn-Off Fall Time	t_f			56		

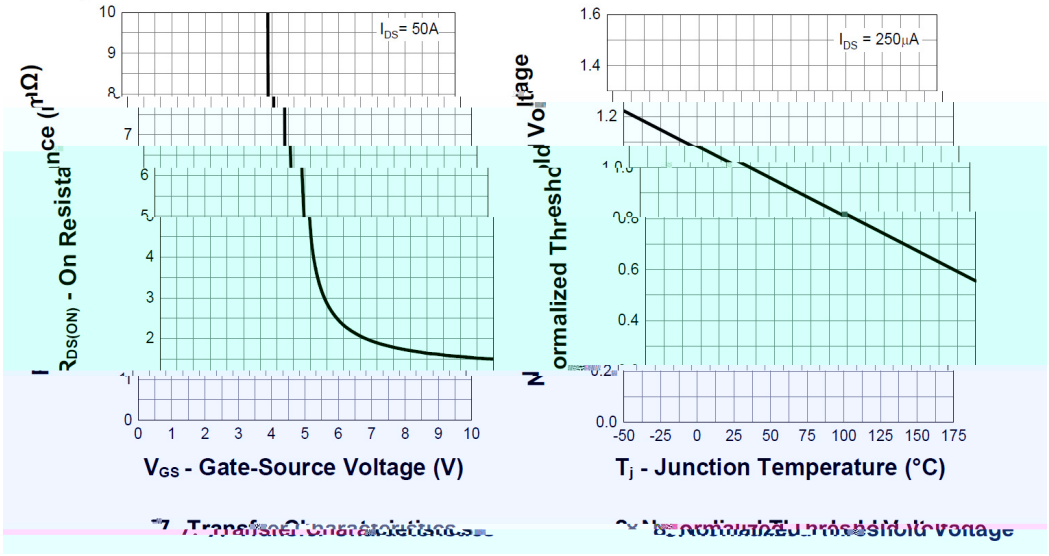


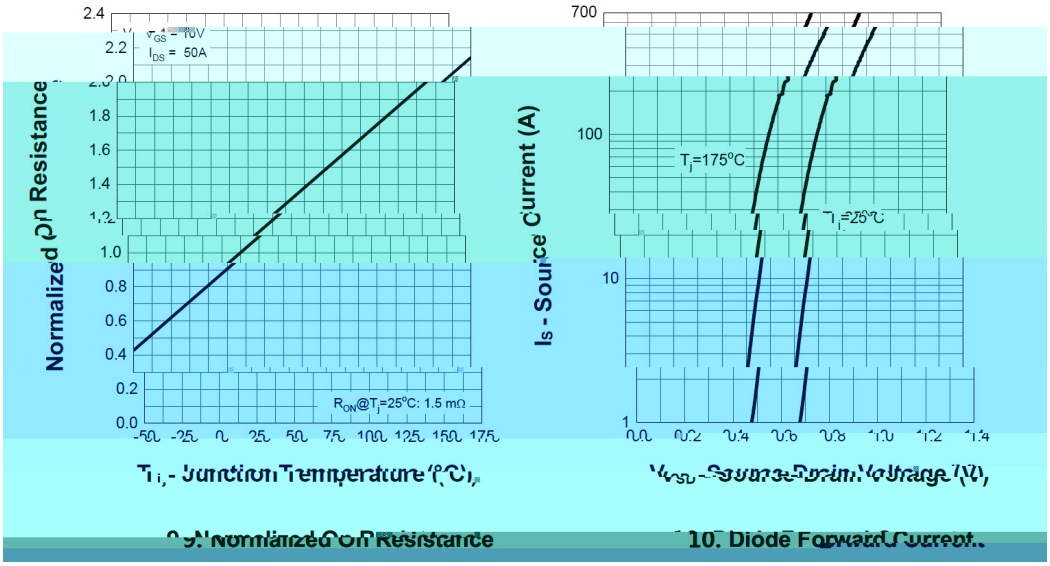


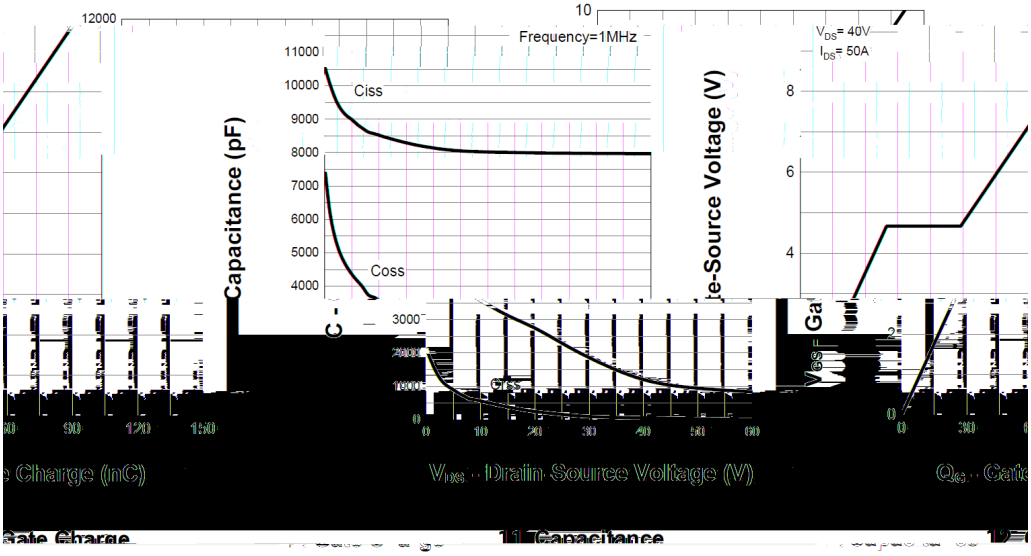
/oltage (V) Square Wave Pulse Duration (sec) V_{DS} - Drain-Source V

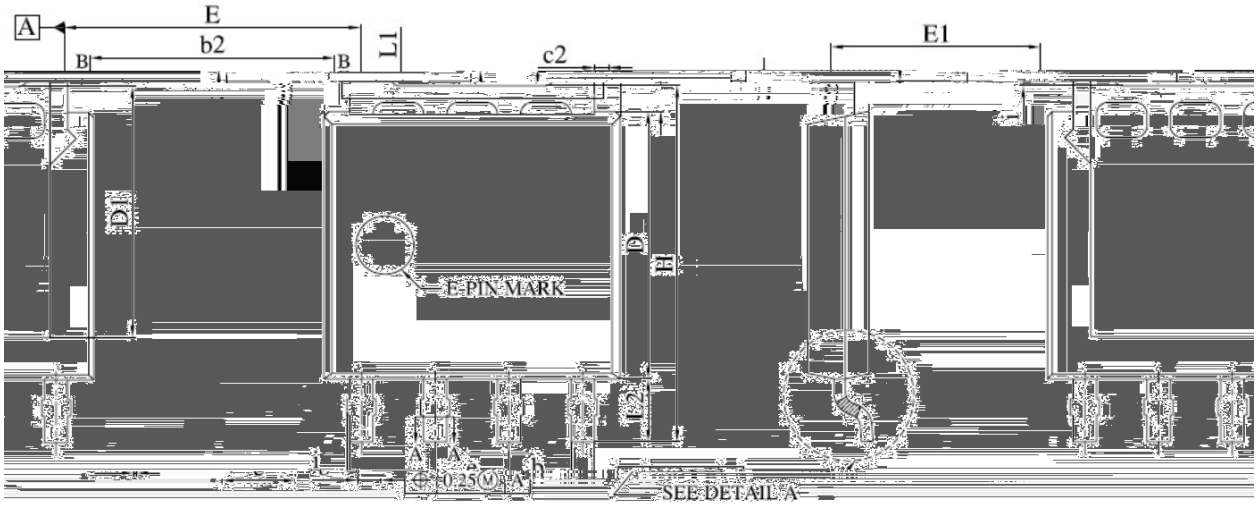
ı Area 4. Transient Thermal Impedance 3. Safe Operatior

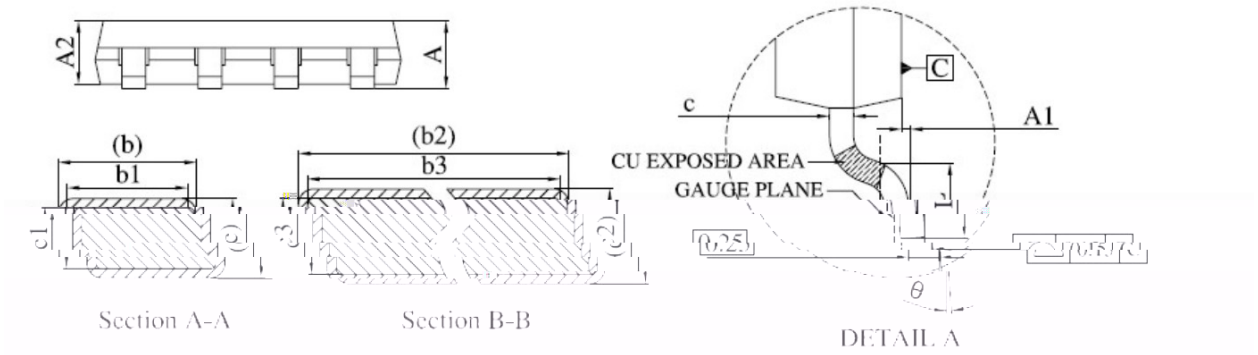



I_{DS}= 50A
$R_{DS(ON)}$ - On Resistance (mΩ)
V_{GS} - Gate-Source Voltage (V)
I_{DS} = 250μA
Normalized Threshold Voltage
T_j - Junction Temperature (°C)


V_{GS} = 10V
I_{DS} = 50A
Normalized On Resistance
$R_{ON}@T_j$=25°C: 1.5 mΩ
T_j=175°C
T_j=25°C
I_S - Source Current (A)


Frequency=1MHz
Ciss
Coss
Capacitance (pF)
V_{DS}= 40V
I_{DS}= 50A
V_{DS} - Drain-Source Voltage (V)





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
c3	0.22	0.28
D	4.45	4.70
D1	-	4.45

Symbol	Dimensions In Millimeters MIN.	MAX.
E	4.95	5.30
E1	3.50	3.70
e	1.27 BSC.	
H	5.95	6.
i	-	0
L	0.40	0
L1	0.27	0
L2	0.80	
θ	0°	

BR

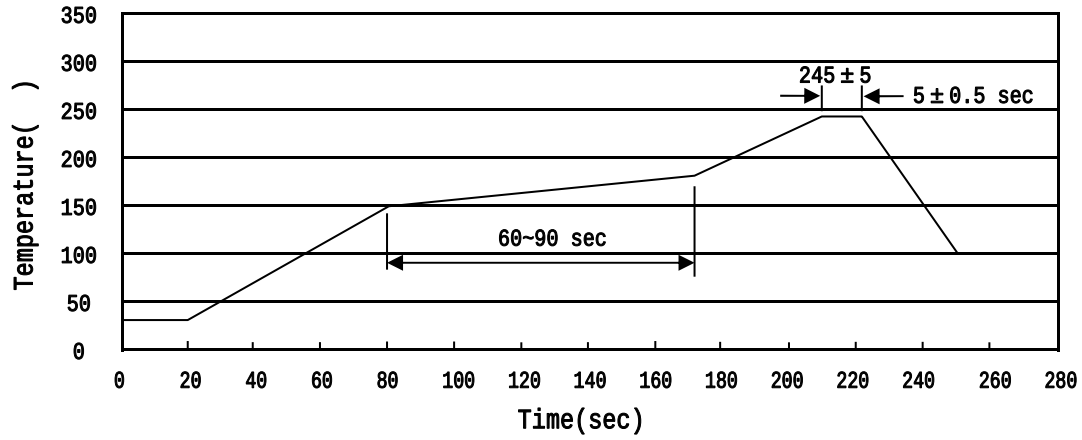
015N08SH

****

Note

BR:	Company Code
015N08SH:	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.	

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

/ 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
LFPAK5×6	3,000	2	6,000	5	30,000	13''×12	356×335×50	385×285×358

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
LFPAK5×6	5,000	2	10,000	5	50,000	13''×12	356×335×50	385×285×358