/ Descriptions

LFPAK5×6 N

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

/ Features

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

$R_{DS(ON)}$@10V ≤ 1.5mq(Typ. 1.3mq)

$R_{DS(ON)}$@6V ≤ 2.2mq(Typ. 1.9mq)

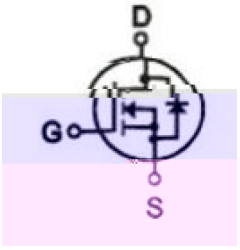
HF Product.

/ Applications

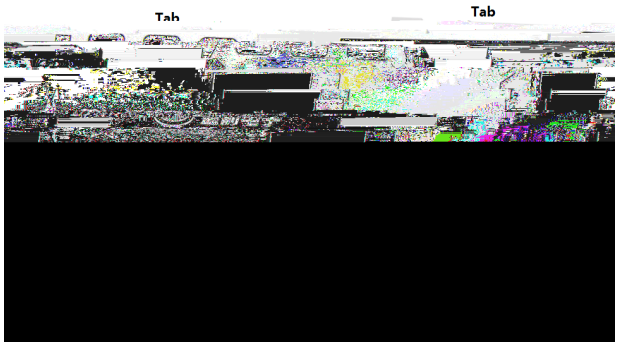
LCDM

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

/ Equivalent Circuit



/ Pinning



PIN1 2 3 S PIN4 G Tab D

/ Marking

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 θ JA	57	/W
Thermal Resistance-Junction to Case	R θ JC	0.4	

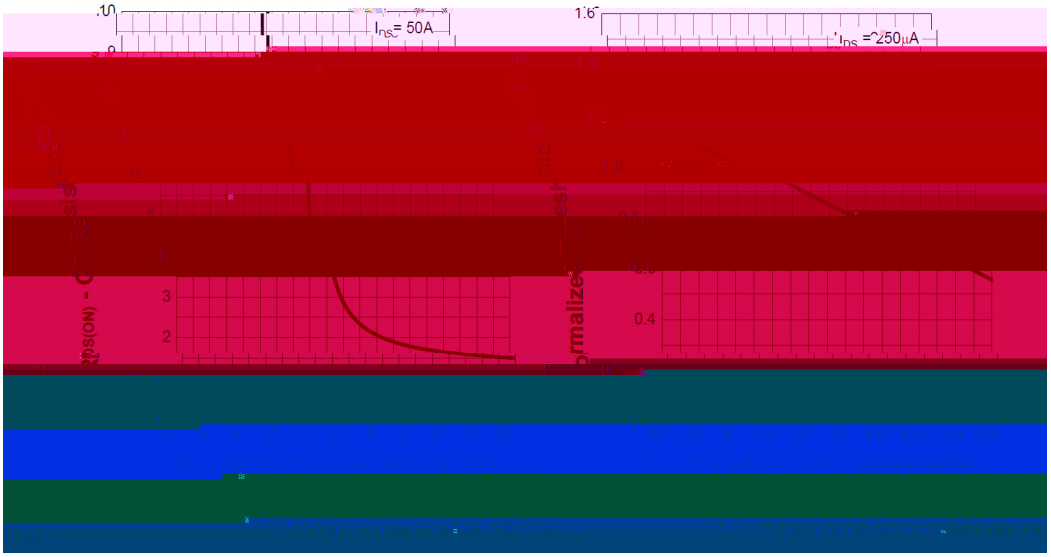
Notes:
Surface Mounted on 1 in^2 pad area, t Ò 10 sec
Pulse width Ò 300 εs, duty cycle Ò 2 %
Limited by bonding wire

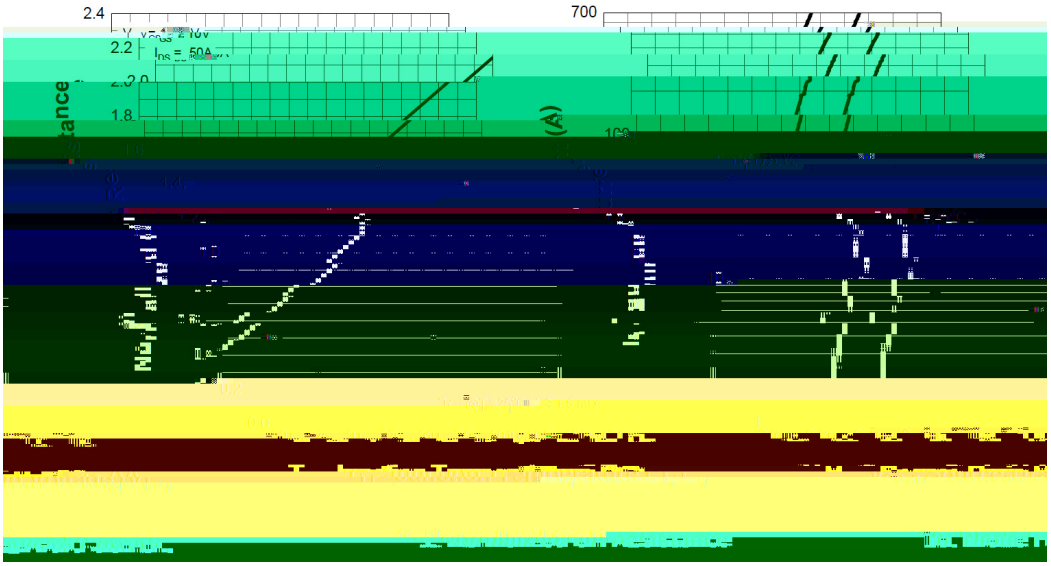
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250εA	80			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=64V V_{GS}=0V			1	εA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250εA	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=50A		1.3	1.5	mq
	$R_{DS(on)}$	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/εs		54		nS

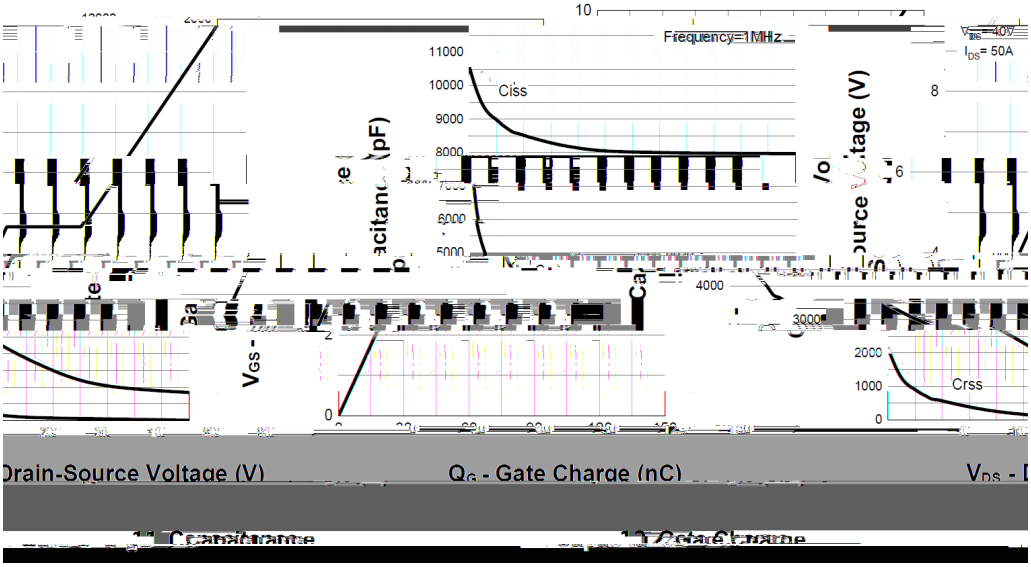
/ Electrical Characteristics(Ta=25)

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=0.8q R_G=3.9q 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		

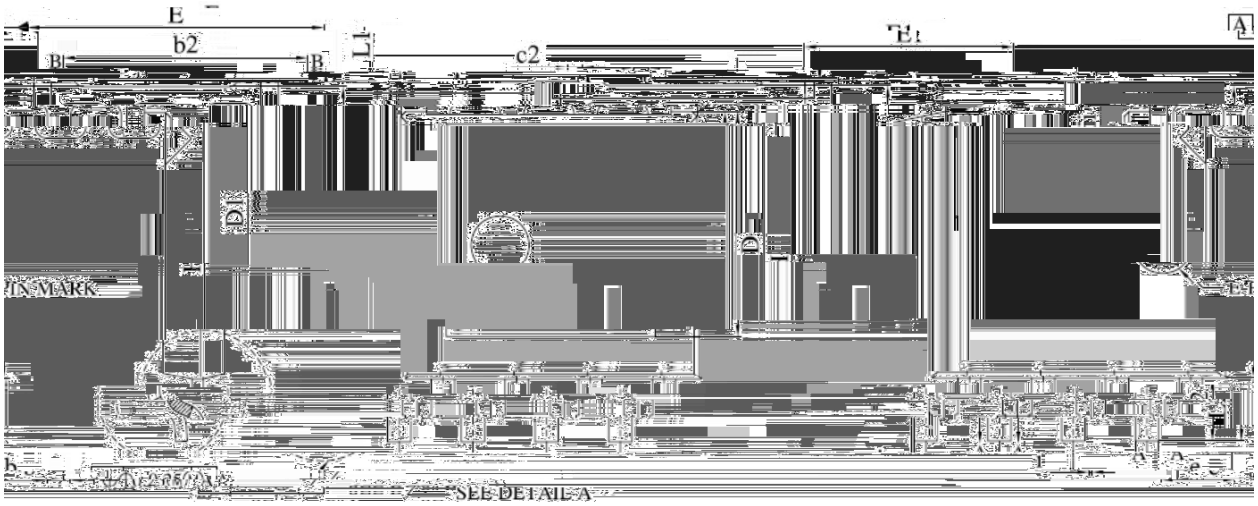
/ Electrical Characteristic Curve

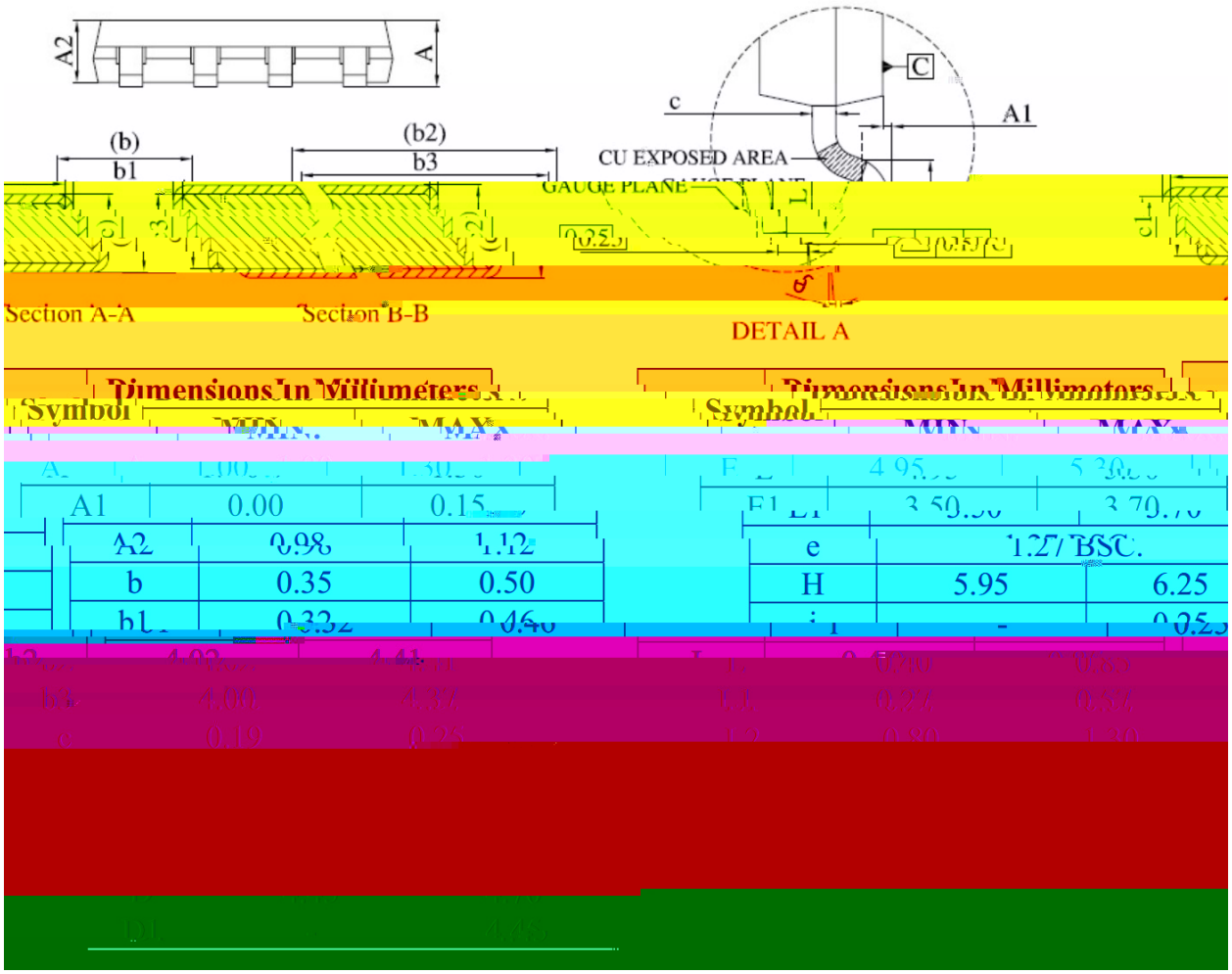






/ Package Dimensions





Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	MIN.	MAX.	Symbol	MIN.	MAX.
A	1.00	1.30	E	4.95	5.30
A1	0.00	0.15	E1	3.50	3.70
A2	0.98	1.12	e	1.27 BSC.	
b	0.35	0.50	H	5.95	6.25
b1	0.32	0.46	L	0.40	0.85
b2	4.90	5.41	L1	0.20	0.60
b3	4.00	4.37	L2	0.27	0.57
c	0.19	0.25	L3	0.80	1.30
c1	0.19	0.23	θ	-	0.25
D	4.80	5.10	θ1	8°	12°
D1	4.04	4.48			

/ Marking Instructions



BR

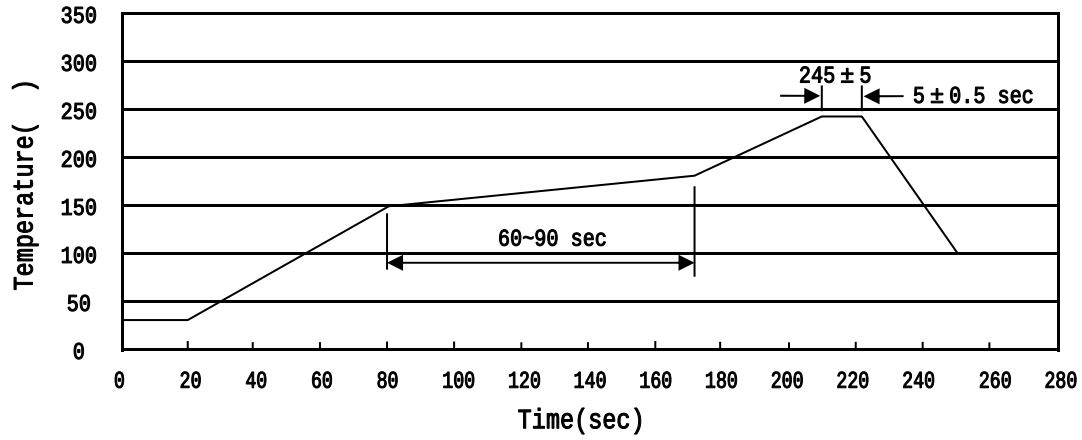
015N08SH

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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.

/ 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
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

/ Notices

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