/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current ①③	I_D(Tc=25℃)	300	A
	I_D(Tc=100℃)	281	A
Pulsed Drain Current ①②	I_{DM}	1200	A
Gate-Source Voltage	V_{GS}	±20	V
Single Pulsed Avalanche Energy L=1.0mH①	E_{AS}	800	mJ
Continuous-Source Current	I_S	300	A
Total Power Dissipation①	P_D(Tc=25℃)	250	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to 175	
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	60	℃/W
Thermal Resistance-Junction to Case①	$R_{\theta JC}$	0.6	

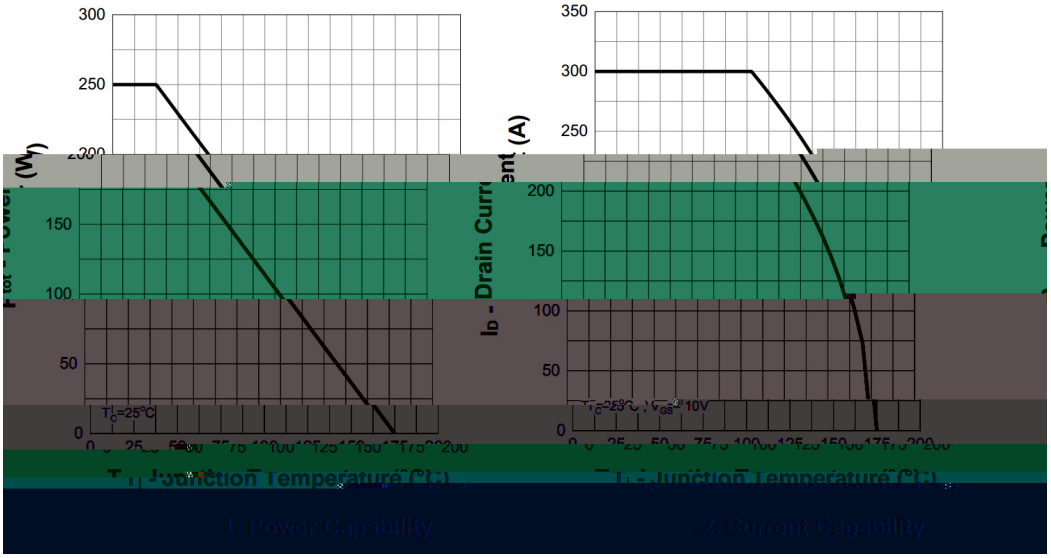
Notes:
Surface Mounted on 1 in^2 pad area, t 10 sec
Pulse width 300 s, duty cycle 2 %
Limited by bonding wire

/ Electrical Characteristics(Ta=25)

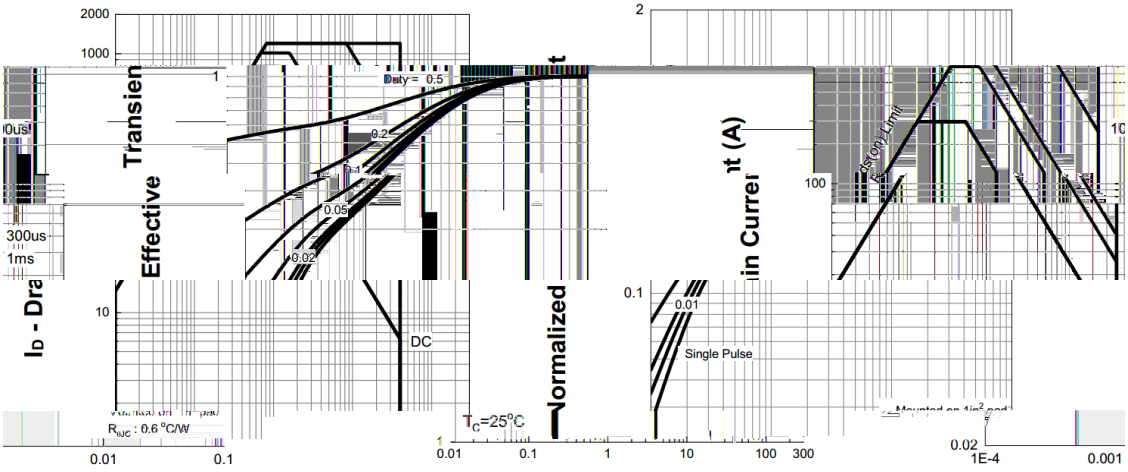
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250 A	40			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=32V V_{GS}=0V			1	A
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250 A	1		2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=30A		0.57	0.68	m
	$R_{DS(on)}$	V_{GS}=4.5V I_D=20A		1.07	1.39	m
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=30A			1.3	V
Reverse Recovery Time	trr	I_{DS} = 30 A, V_{GS} = 0 V dI$_{SD}$/dt = 100 A/ s		71		nS
Reverse Recovery Charge	Qrr			77		nC
Input Capacitance	C_{iss}	V_{DS}=20V V_{GS}=0V f=1.0MHz		5733		pF
Output Capacitance	C_{oss}			2609		
Reverse Transfer Capacitance	C_{rss}			154		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	V_{GS}=10V, V_{DS}=20V, I_D=30A		111		nC
Gate Source Charge	Q_{gs}			21		
Gate Drain Charge	Q_{gd}			27		
Turn-On Delay Time	$t_{d(on)}$	V_{GEN}=10V V_{DS}=20V R_L=0.66 R_G=3.9 I_{DS}=30A		18		ns

/ Electrical Characteristic Curve

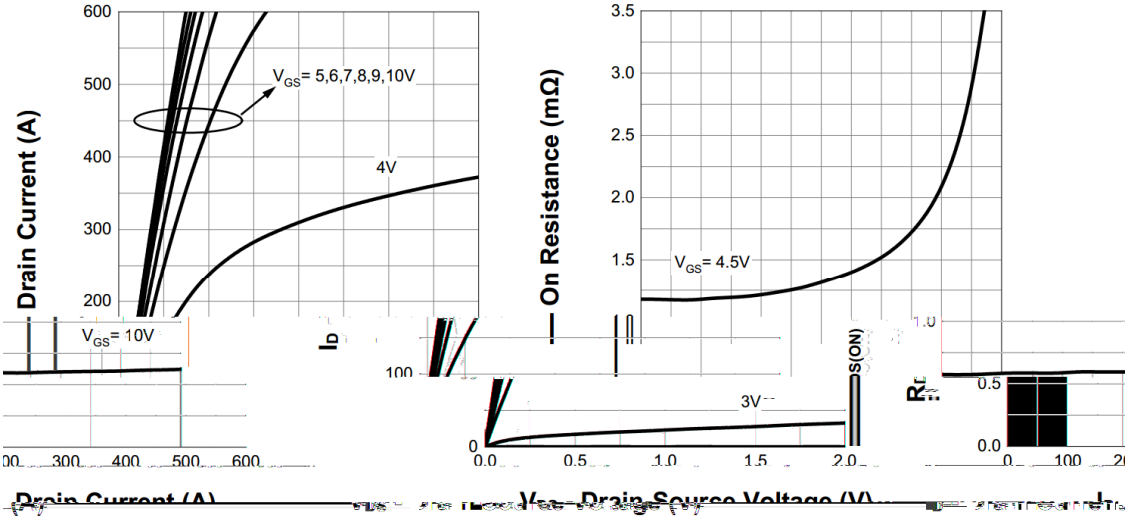


1. Power Capability　　2. Current Capability



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

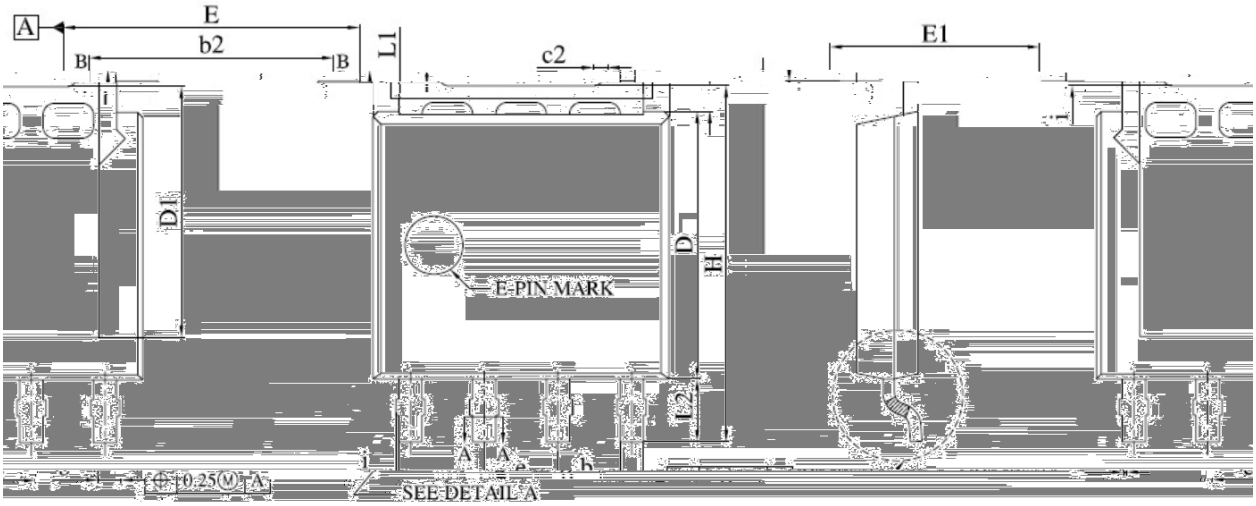
Thermal Impedance　　3. Safe Operating Area　　4. Transient

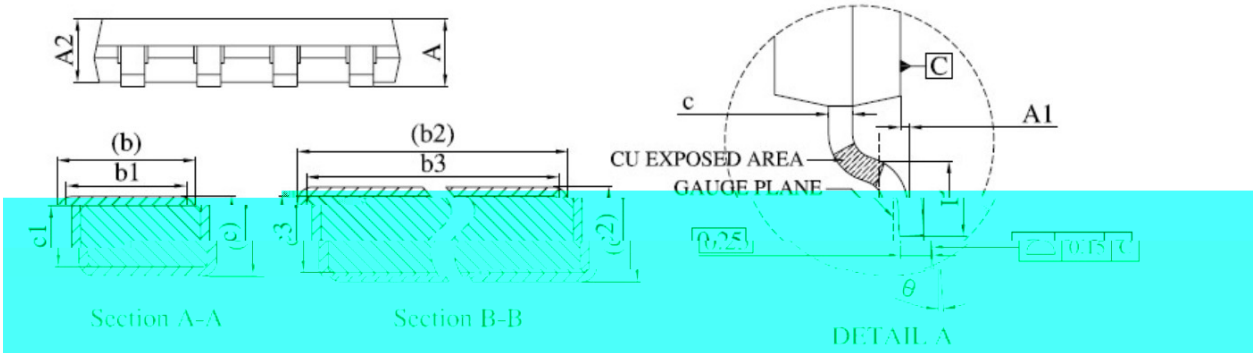


e　　5. Output Characteristics　　6. On Resistanc

BRCS006N04SSL

/ Package Dimensions

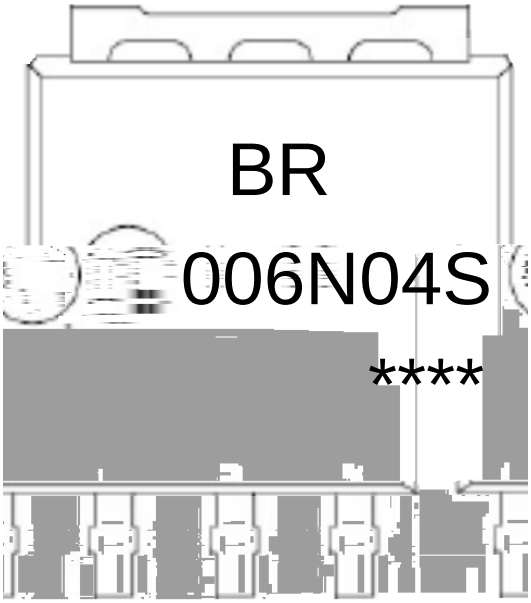




Symbol	Dimensions In Millimeters	
	MIN.	MAX.
A	1.00	1.30
A1	0.00	0.15
A2	0.98	1.12
b	0.35	0.50
b1	0.32	0.46
b2	4.02	4.41
b3	4.00	4.37
c	0.19	0.25
c1	0.17	0.23
c2	0.24	0.30
c3	0.22	0.28
D	4.45	4.70
D1	-	4.45

Symbol	Dimensions In Millimeters	
	MIN.	MAX.
E	4.95	5.30
E1	3.50	3.70
e	1.27 BSC.	
H	5.95	6.2
i	-	0.2
L	0.40	0.85
L1	0.27	0.57
L2	0.80	1.30
θ	0°	8°

/ Marking Instructions



BR

006N04S

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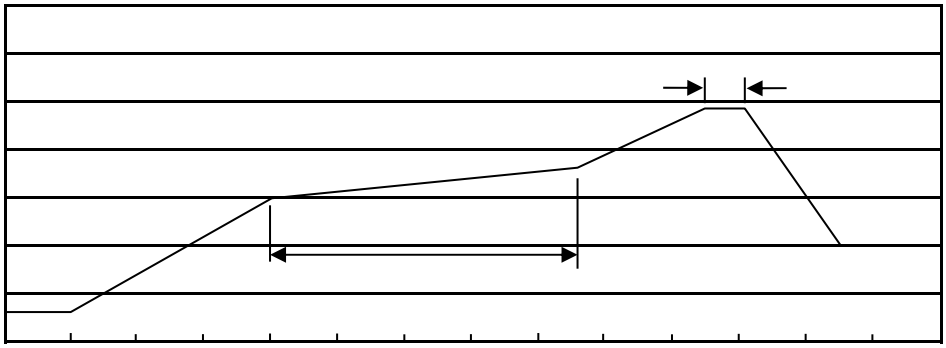
Note

BR:	Company Code
006N04S:	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 ;>ß ƒH					Dimension ;>ß p . (unit ˇ mm³)		
	/	/	/	/	/			
LFPAK5×6	3,000	2	6,000	5	30,000	13''×12	356×335×50	385×285×358

Package Type	Units ;>ß ƒH					Dimension ;>ß p . (unit ˇ mm³)		
	/	/	/	/	/			
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.