

BRCS004N04SSL

Rev.C Jan.-2026

DATA SHEET

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current	$I_D(T_C=25^\circ C)$	325	A
	$I_D(T_C=100^\circ C)$	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}	1250	mJ
Continuous-Source Current	$I_S(T_C=25^\circ C)$	300	A
Total Power Dissipation	$P_D(T_C=25^\circ C)$	375	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 175	
Thermal Resistance-Junction to Ambient	R_{JA}	60	/W
Thermal Resistance-Junction to Case	R_{JC}	0.4	

Notes:

Pulse width 300 μs , duty cycle 2 %
 Surface Mounted on 1 in² pad area, t 10 sec
 Limited by bonding wire

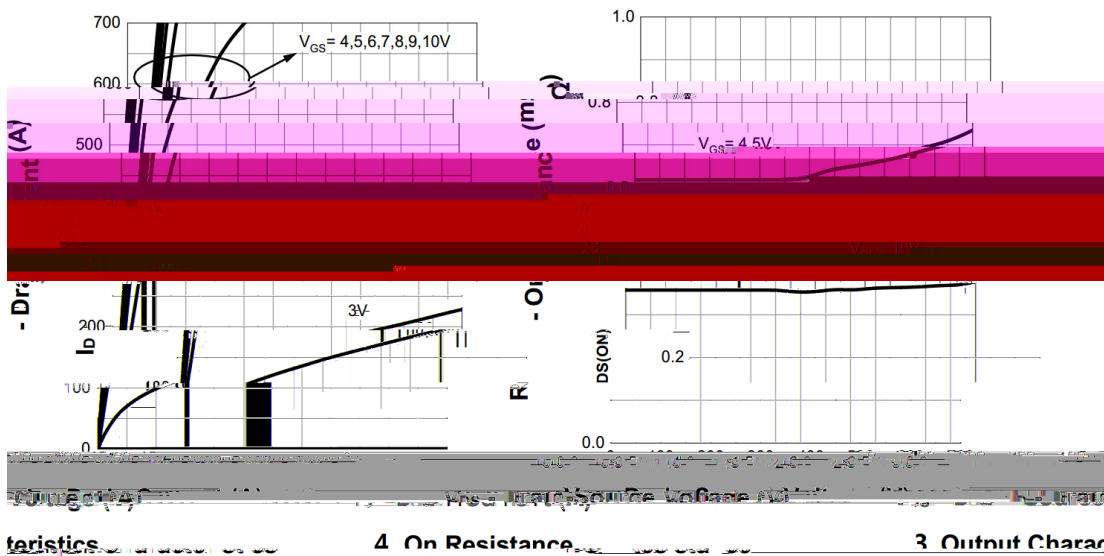
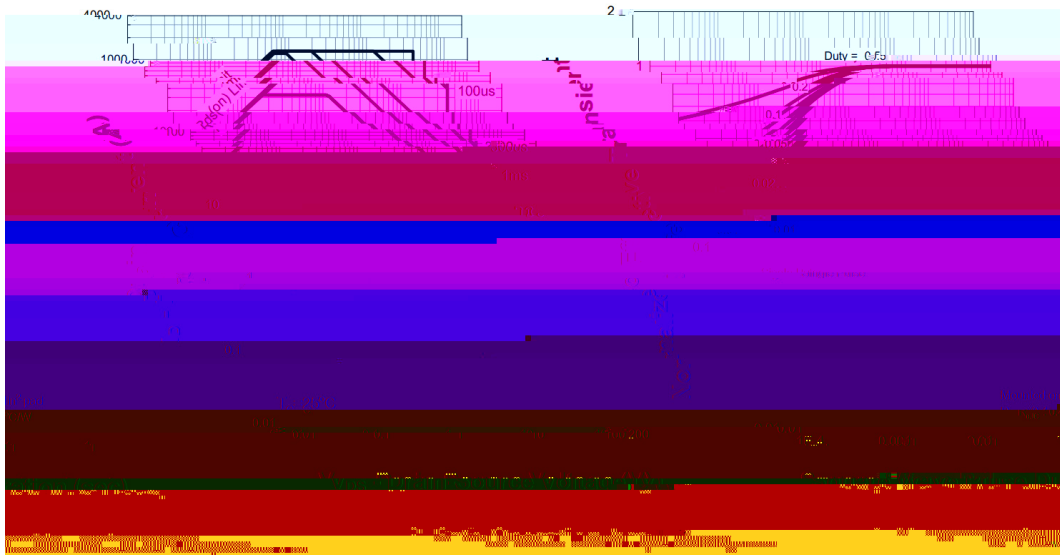
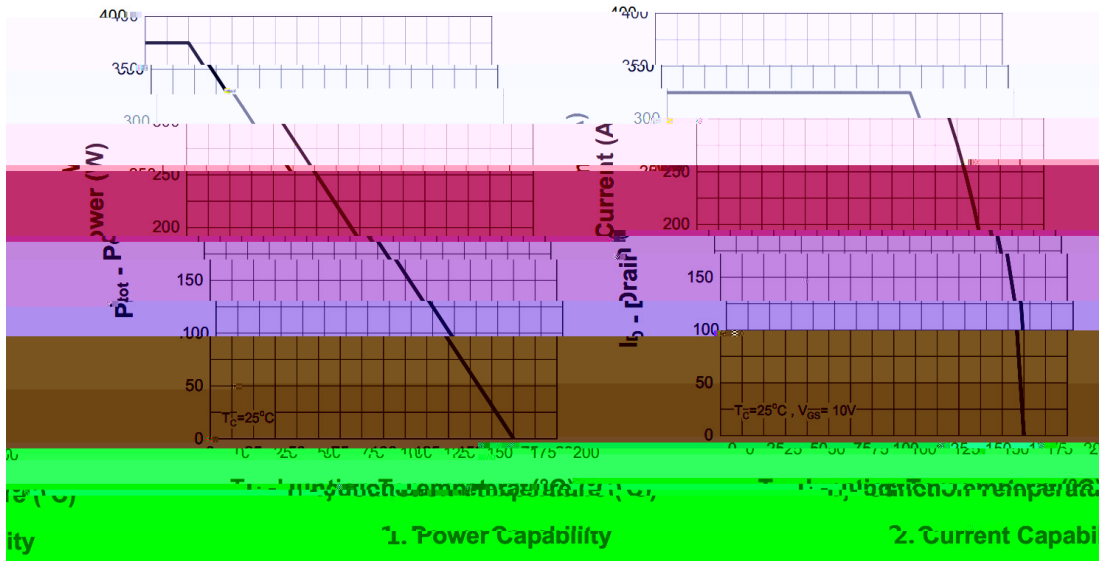
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	40			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=32V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1		2	V

Static Drain-Source

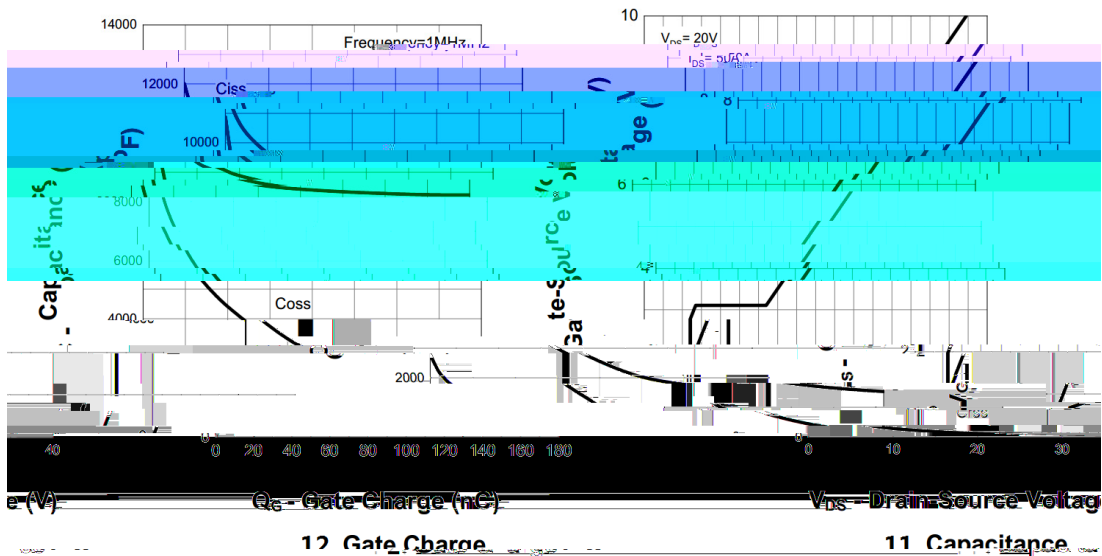
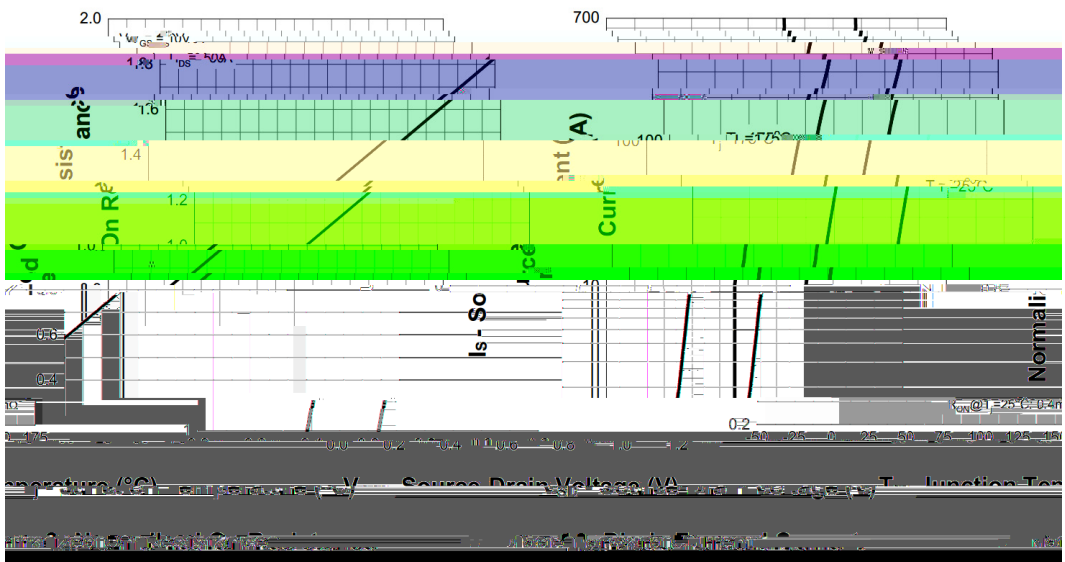
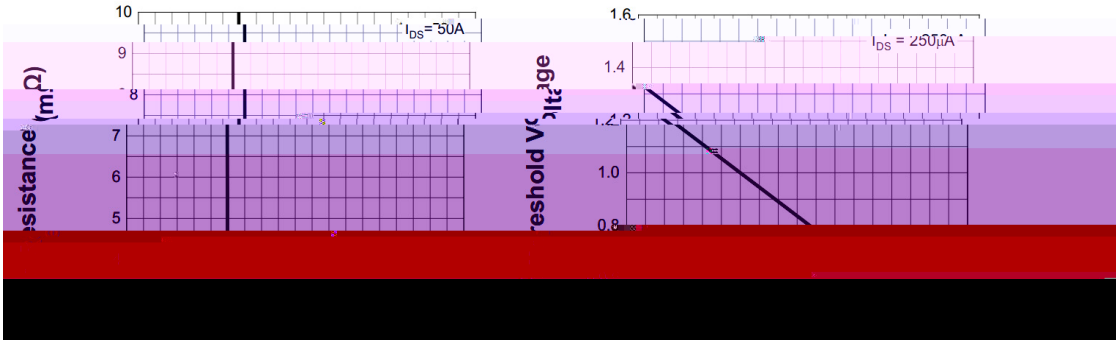
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	$V_{GS}=10V, V_{DS}=20V, I_D=50A$		169		nC
Gate Source Charge	Q_{gs}			27		
Gate Drain Charge	Q_{gd}			37		
Turn-On Delay Time	$t_{d(on)}$	$V_{GEN}=10V V_{DS}=20V$ $R_L=0.4 R_G=3.9$ $I_{DS}=50A$		14		ns
Turn-On Rise Time	t_r			92		
Turn-Off Delay Time	$t_{d(off)}$			178		
Turn-Off Fall Time	t_f			144		

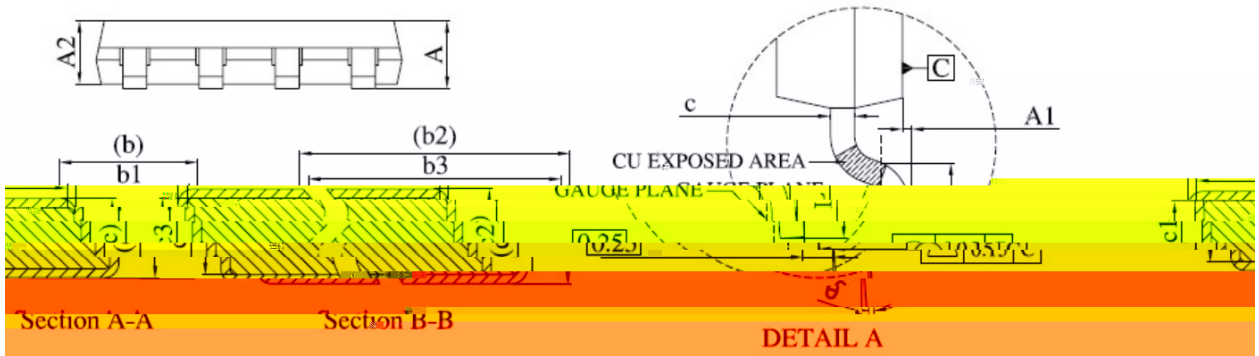
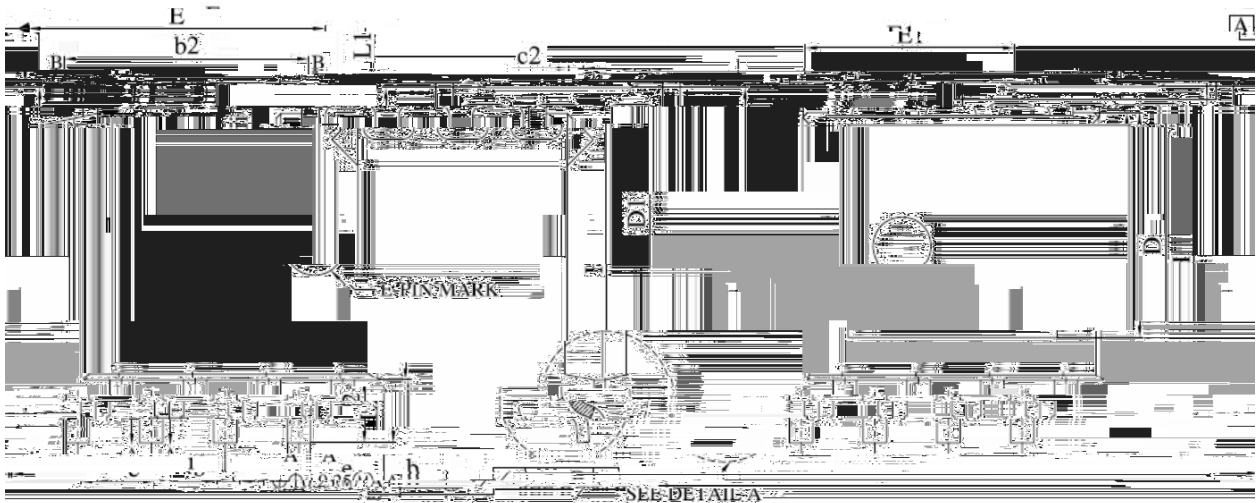
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Package Dimensions



Dimensions in Millimeters			Dimensions in Millimeters		
Symbol	MIN.	MAX.	Symbol	MIN.	MAX.
A1	0.00	0.15	F1	4.95	5.20
A2	0.98	1.12	F1L1	3.50	3.70
b	0.35	0.50	e	1.27 BSC.	
b1	0.33	0.46	H	5.95	6.25
			;		0.25

/ Marking Instructions



BR

004N04S

Note

BR: Company Code

004N04S: 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
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/ Packaging SPEC.

/ REEL

Package Type	Units	Dimension	(unit mm ³)
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