

BRCS009N10SHCD

Rev.A Jul.-2025



DATA SHEET

TO-263-7LA N

N-CHANNEL MOSFET in a TO-263-7LA Plastic Package.

BRCS009N10SHCD

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Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	100	V
Drain Current DC		$I_D(T_c=25^\circ\text{C})$	300	A
		$I_D(T_c=100^\circ\text{C})$	300	A
Pulsed Drain Current ^{*,**}		I_{DM}	1200	A
Gate-Source Voltage		V_{GS}	± 20	V
Continuous-Source Current		$I_S(T_c=25^\circ\text{C})$	300	A
Single Pulsed Avalanche Energy $L=1.0\text{mH}$		E_{AS}	2592	mJ
Total Power Dissipation		$P_D(T_c=25^\circ\text{C})$	750	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 175	
Thermal Resistance-Junction to Ambient ^{**}	Steady-State	$R_{\theta JA}$	44	/W
Thermal Resistance-Junction to Case ^{**}	Steady-State	$R_{\theta JC}$	0.2	

Notes:

* Pulse width 300 μs , duty cycle 2 %

** Surface Mounted on minimum footprint pad area

*** Limited by bonding wire

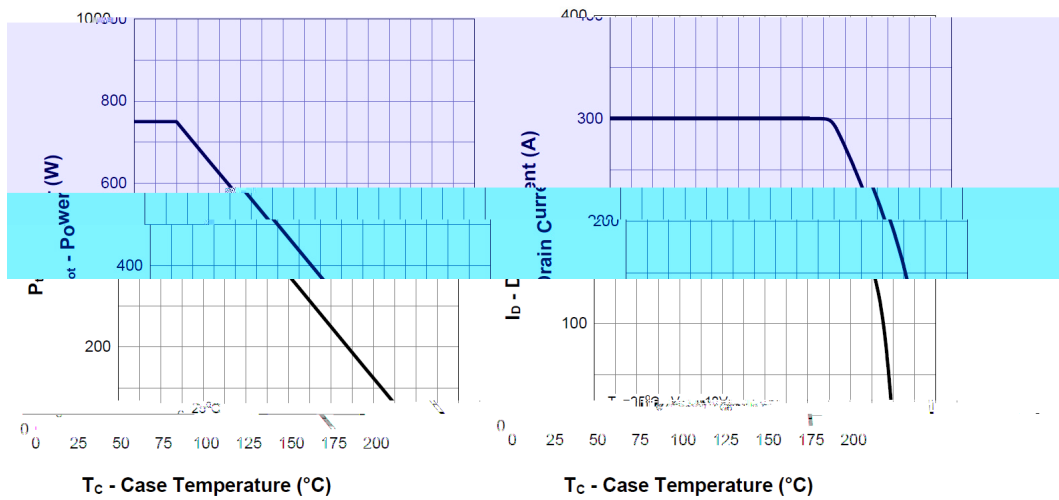
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
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/ Electrical Characteristics(Ta=25)

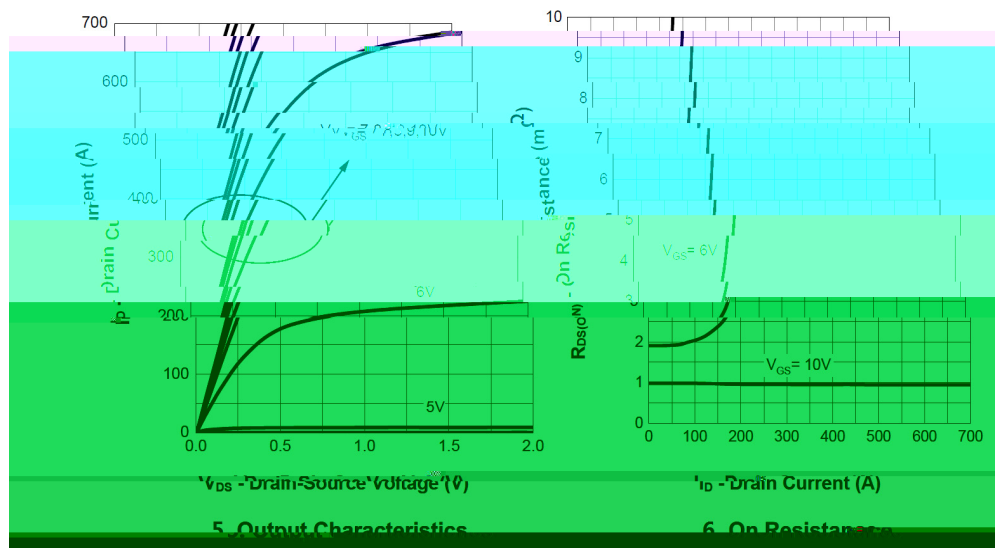
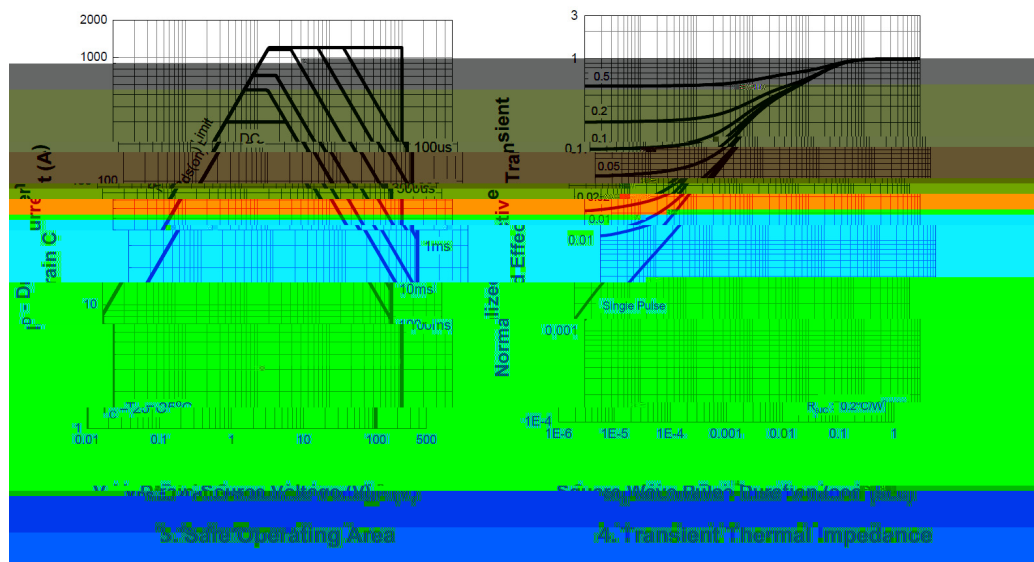
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	$V_{GS}=10V$ $V_{DS}=50V$ $I_D=50A$		176		nC
Gate Source Charge	Q_{gs}			75		
Gate Drain Charge	Q_{gd}			32		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=50V$ $R_L=1$ $R_{GEN}=3.9$ $I_{DS}=50A$		46		nS
Turn-On Rise Time	t_r			94		
Turn-Off Delay Time	$t_{d(off)}$			69		
Turn-Off Fall Time	t_f			70		



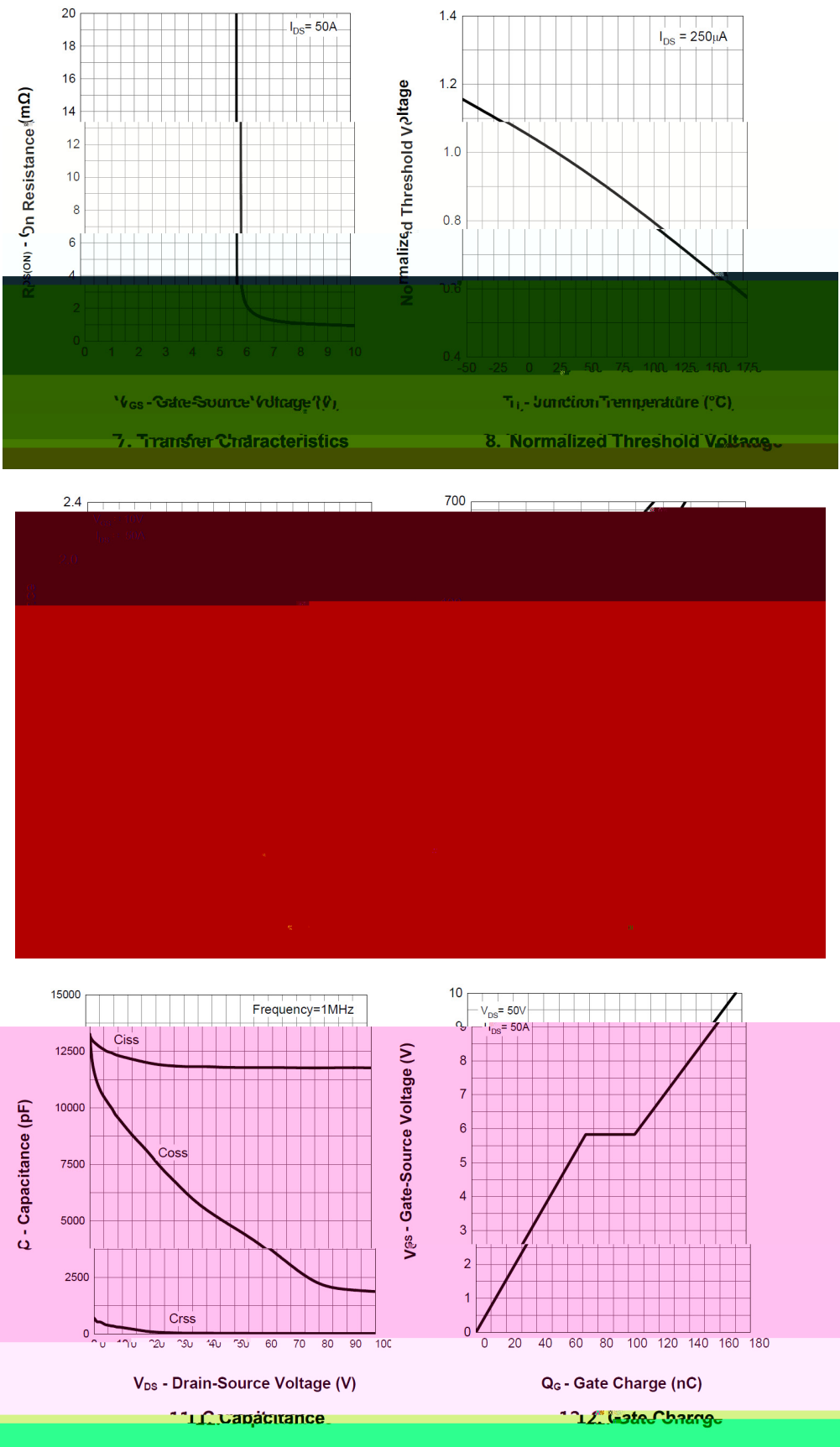
/ Electrical Characteristic Curve



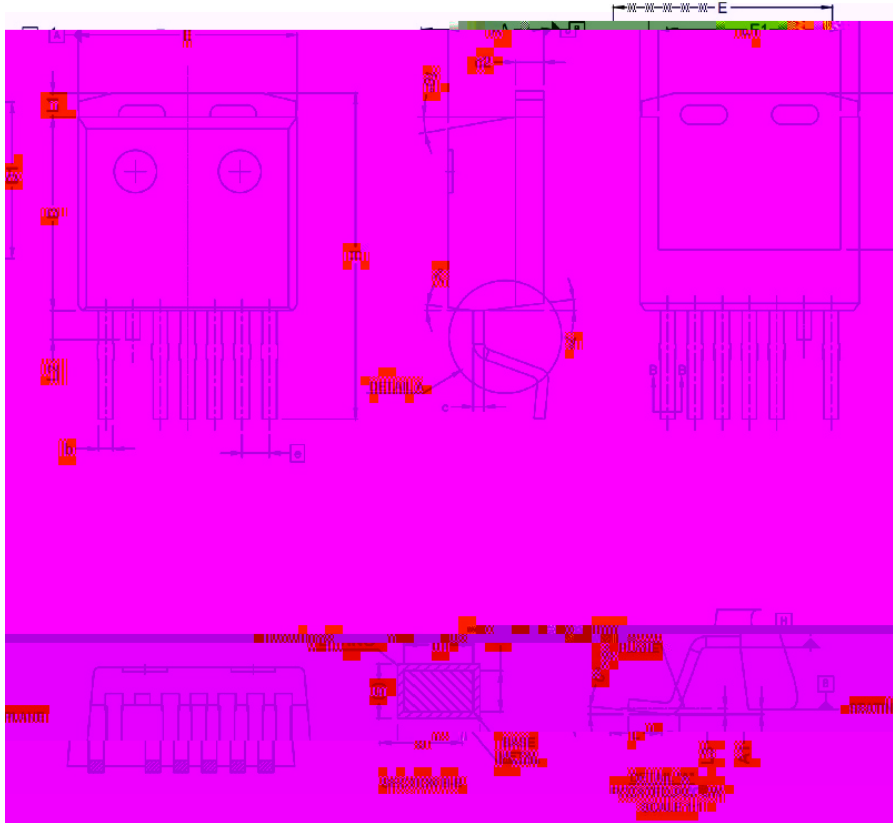
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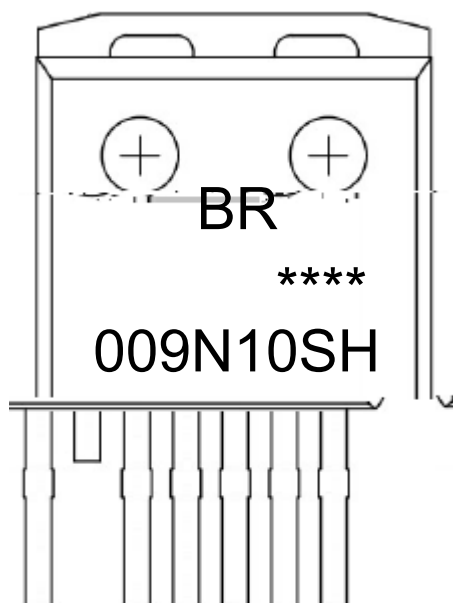
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



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009N10SH

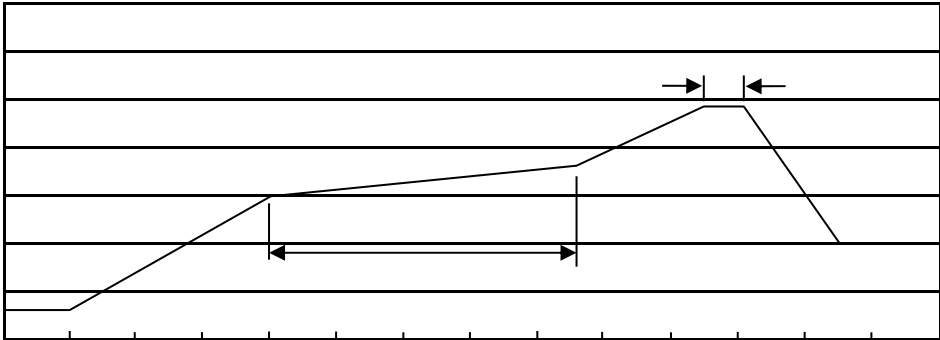
Note:

BR: Company Code

009N10SH: Product Type Code

****: Lot No. Code, code change with Lot No.

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- 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 mm ³)		
TO-263-7LA	800	1	800	6	4,800	13 ×24	360×360×50	380×335×366

/ Notices

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