

BRCS022N06SHBD

Rev.A Dec.-2024

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TO-263 .> // x N ?ú 3 « | • 'ož

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

□ a / Feats

$V_{DS}=60V$ $I_D=225A$

$R_{DS(on)}@10V$ "2.2m (Type. 1.9m)

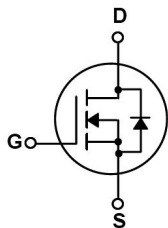
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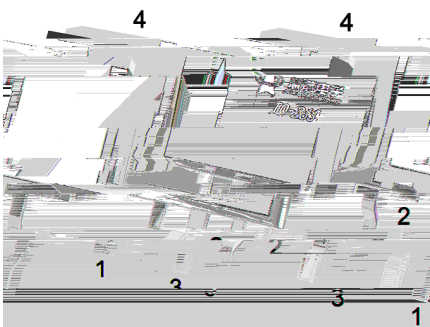
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High Efficiency Synchronous Rectification in SMPS,Uninterruptible Power Supply,BLDC Motor drive applications,Battery powered circuits.

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PIN1 y G PIN 2o•4 y D PIN 3 y S

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See Marking Instructions.



Static Characteristics (Ta=25℃)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	225	A
Pulsed Drain Current	I_{DM}	646	A
Gate-Source Voltage	V_{GS}	± 20	V
Single Pulsed Avalanche Energy L=0.5mH	E_{AS}	380	mJ
Avalanche Current	I_{AS}	30.8	A
Total Power Dissipation	$P_D(T_c=25^\circ\text{C})$	125	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	Steady-State $R_{\theta JA}$	50	°C/W
Thermal Resistance-Junction to Case	Steady-State $R_{\theta JC}$	0.63	

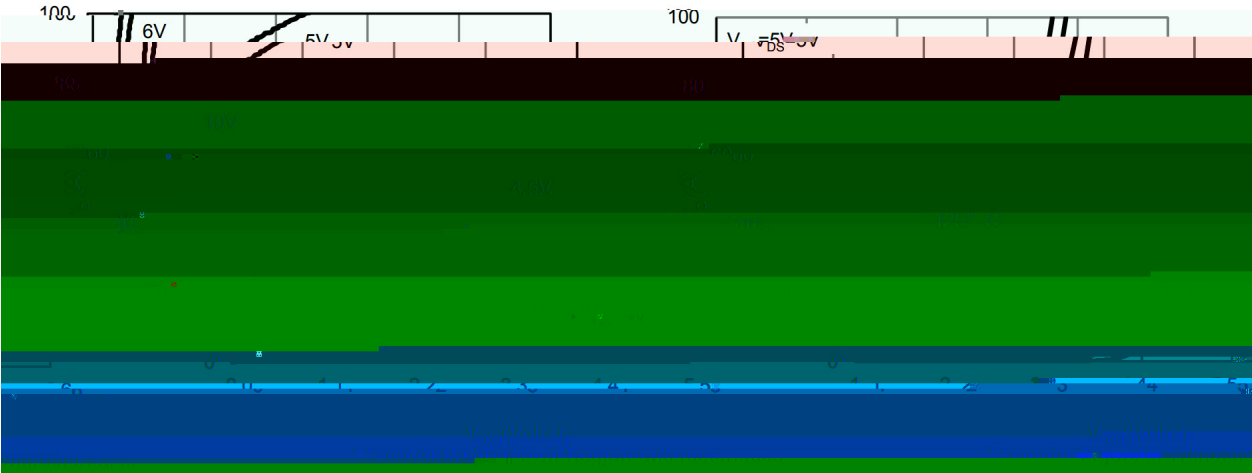
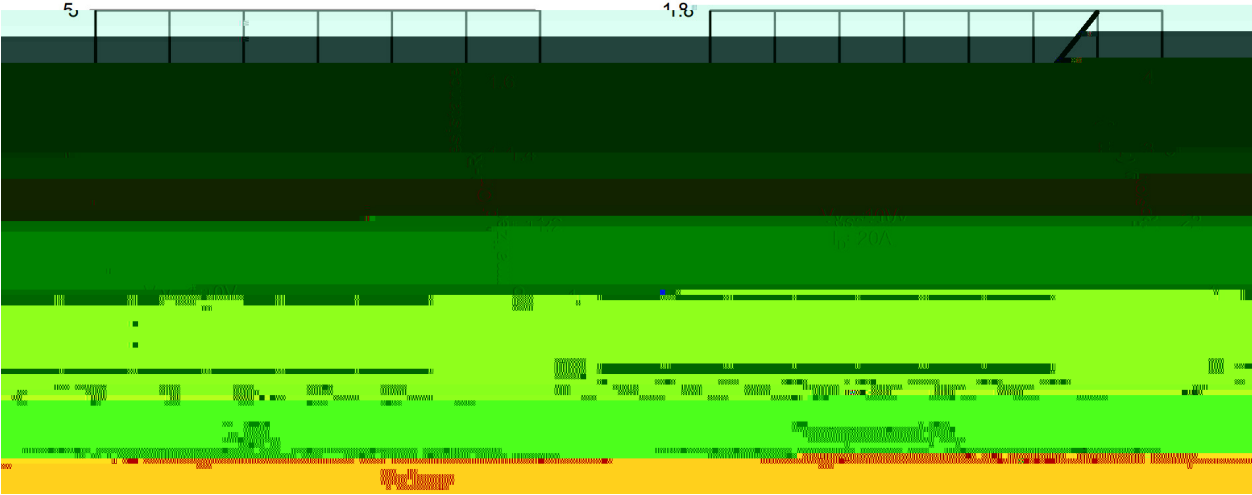
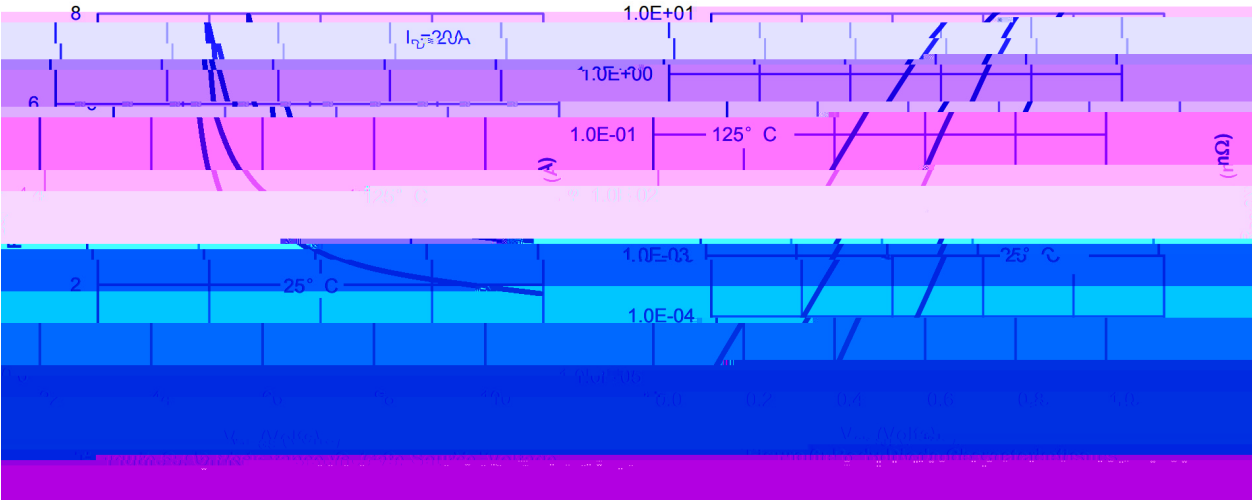
Dynamic Characteristics (Ta=25℃)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V, I_D=250\mu A$	60	65		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60V, V_{GS}=0V$			1	A
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	2	3	4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$		1.9	2.2	mΩ
Forward On Voltage	V_{SD}	$V_{GS}=0V, I_S=1A$			1.2	V
Gate resistance	R_g	$f=1MHz$		1.0		Ω
Input Capacitance	C_{iss}	$V_{DS}=25V, V_{GS}=0V, f=1MHz$		6700		pF
Output Capacitance	C_{oss}			1400		
Reverse Transfer Capacitance	C_{rss}			70		

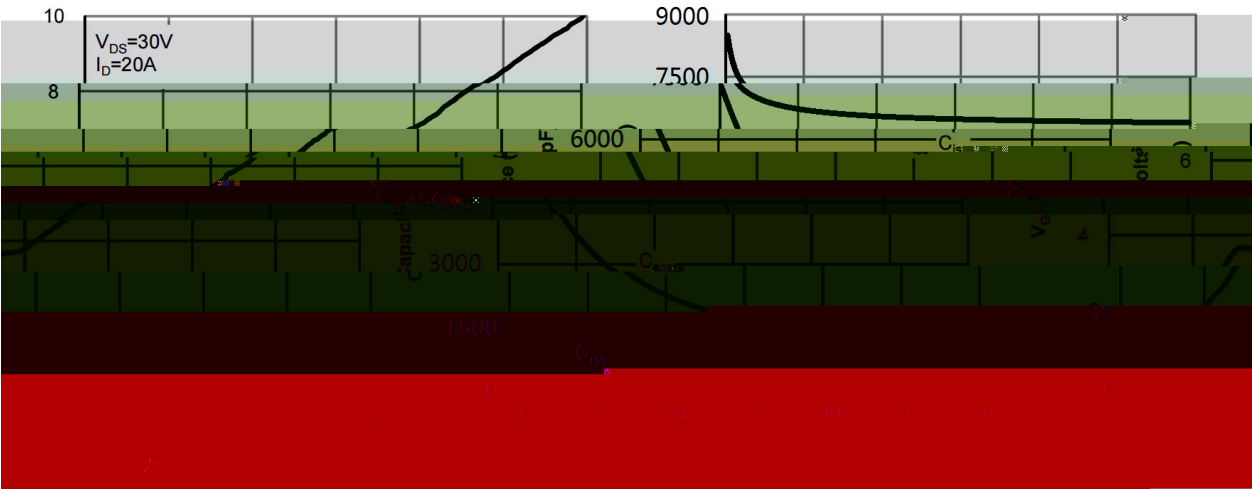
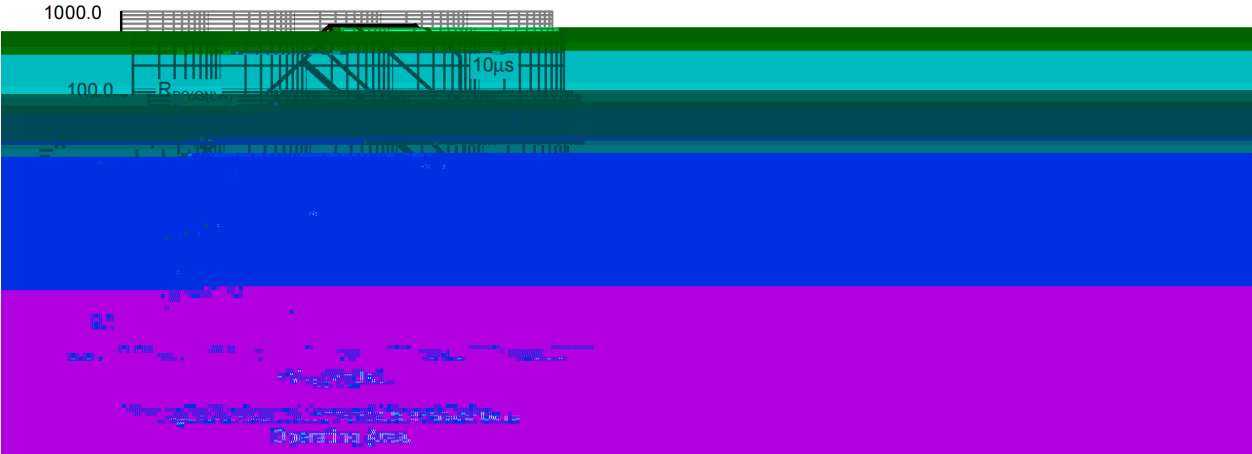
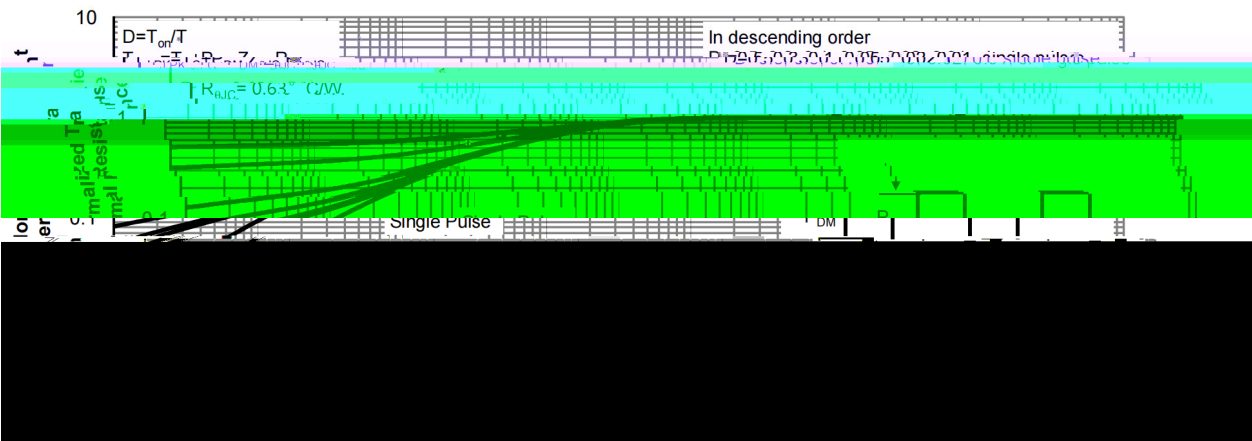
Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Qg	VGS=10V VDS=30V ID=20A		60		nC
Gate Source Charge	Qgs			16		
Gate Drain Charge	Qgd			3		
Turn-On Delay Time	td(on)	VGS=10V VDS=20V RL=1 RGEN=3		13		ns
Turn-On Rise Time	tr			4		
Turn-Off Delay Time	td(off)			47		
Turn-Off Fall Time	tf			6.5		

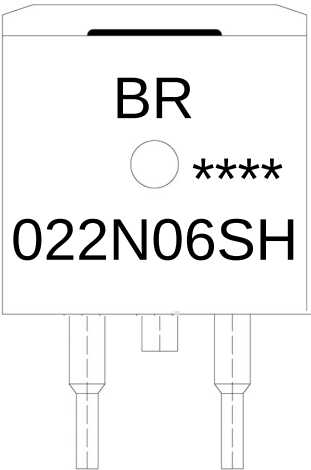
Electrical Characteristics



Electrical Characteristics



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Note:
BR: Company Code
022N06SH: Product Type Code
****: Lot No. Code, code change with Lot No

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- 20• Q > “ † 245

Note:
1.Preheating:150~180 - , Time:60~90sec.