

BRCS065N08SHBD

Rev.A Sep.-2022

TO-263

N



Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	80	V
Drain Current		$I_D(T_C=25^\circ\text{C})$	115	A
Pulsed Drain Current		I_{DM}	241	A
Gate-Source Voltage		V_{GS}	≤ 20	V
Single Pulsed Avalanche Energy($L=0.5\text{mH}$)		E_{AS}	710	mJ
Avalanche Current		I_{AS}	36.5	A
Total Power Dissipation		$P_D(T_C=25^\circ\text{C})$	156.2	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	$t \leq 10\text{s}$	$R_{\theta JA}$	15.5	/W
	Steady-State		62.5	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	0.8	

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0\text{V}$	$I_D=250\mu\text{A}$	80	95		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=85\text{V}$	$V_{GS}=0\text{V}$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20\text{V}$	$V_{DS}=0\text{V}$			≤ 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$	$I_D=250\mu\text{A}$	2	3	4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$	$I_D=20\text{A}$		5.1	6.5	m Ω
	$R_{DS(on)}$	$V_{GS}=6\text{V}$	$I_D=10\text{A}$		7.0	10	
Forward On Voltage	V_{SD}	$V_{GS}=0\text{V}$	$I_S=1\text{A}$			1.2	V
Gate resistance	R_g	$f=1\text{MHz}$			1.4		Ω
Input Capacitance	C_{iss}	$V_{DS}=25\text{V}$ $f=1\text{MHz}$	$V_{GS}=0\text{V}$		3230		pF
Output Capacitance	C_{oss}				1310		
Reverse Transfer Capacitance	C_{rss}				185		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10\text{V},$ $I_D=20\text{A}$	$V_{DS}=40\text{V},$		46		nC
Gate Source Charge	Q_{gs}				13		
Gate Drain Charge	Q_{gd}				8.5		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ V_{DS}				

Electrical Characteristic Curve

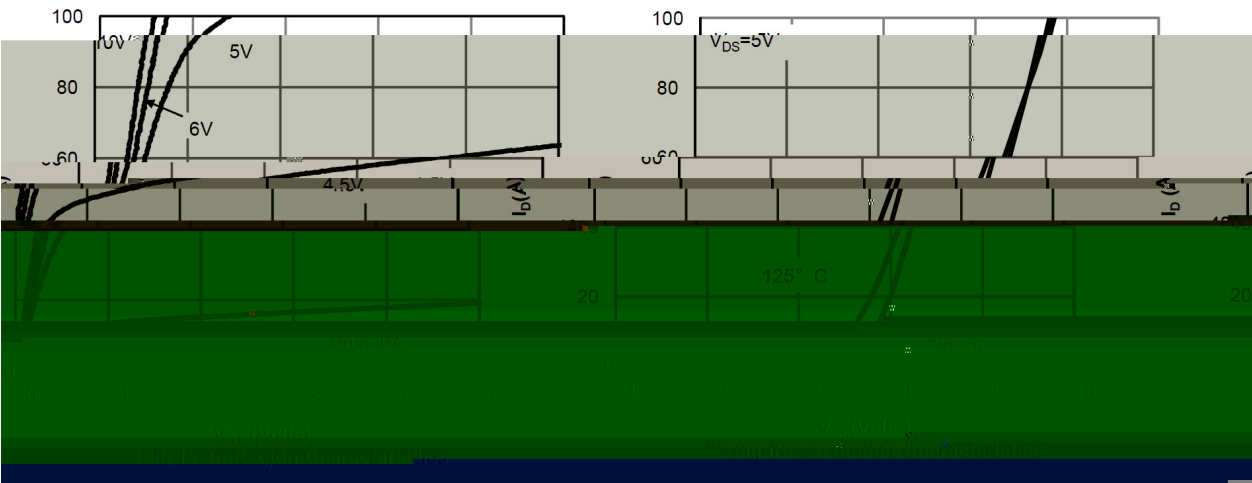
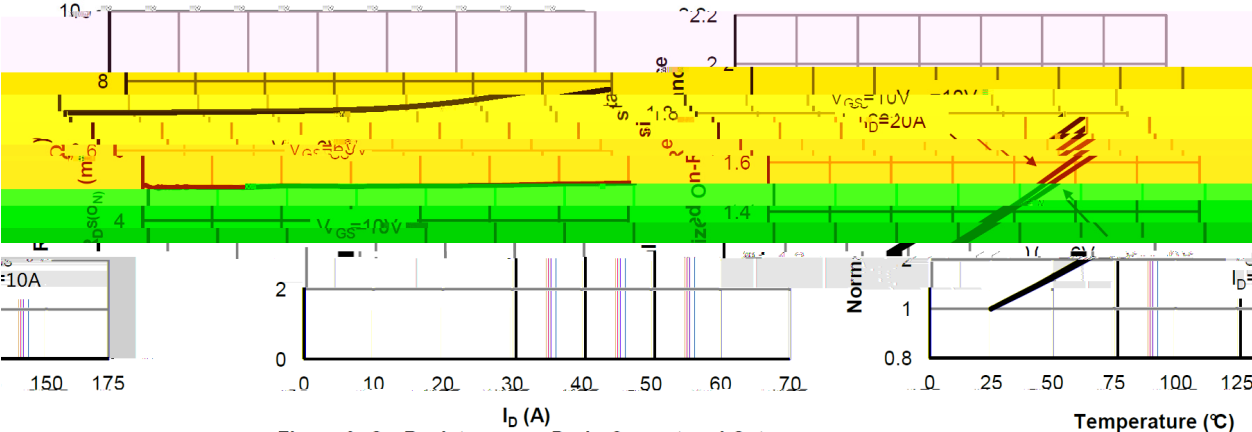
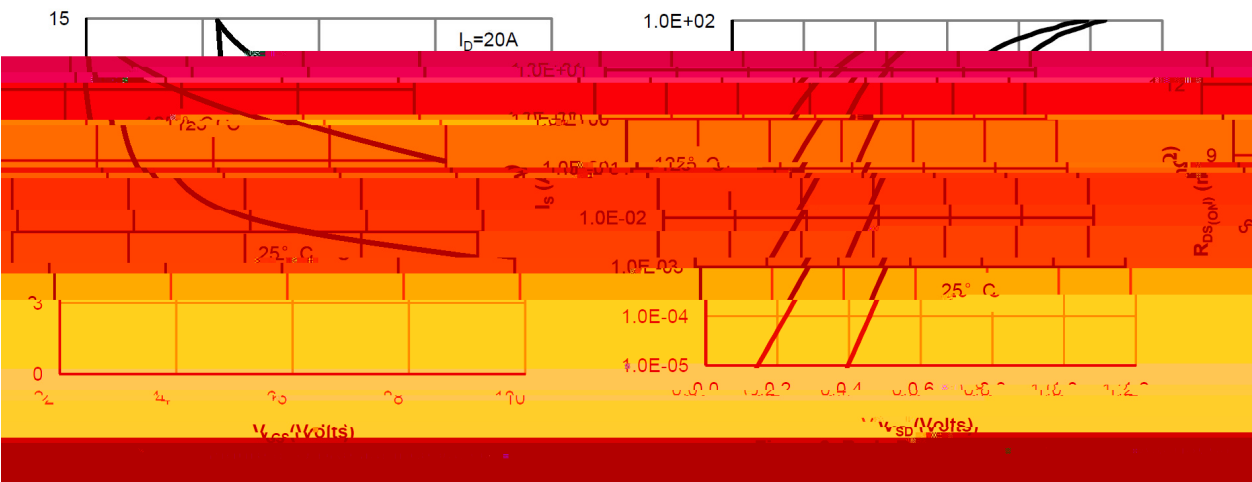
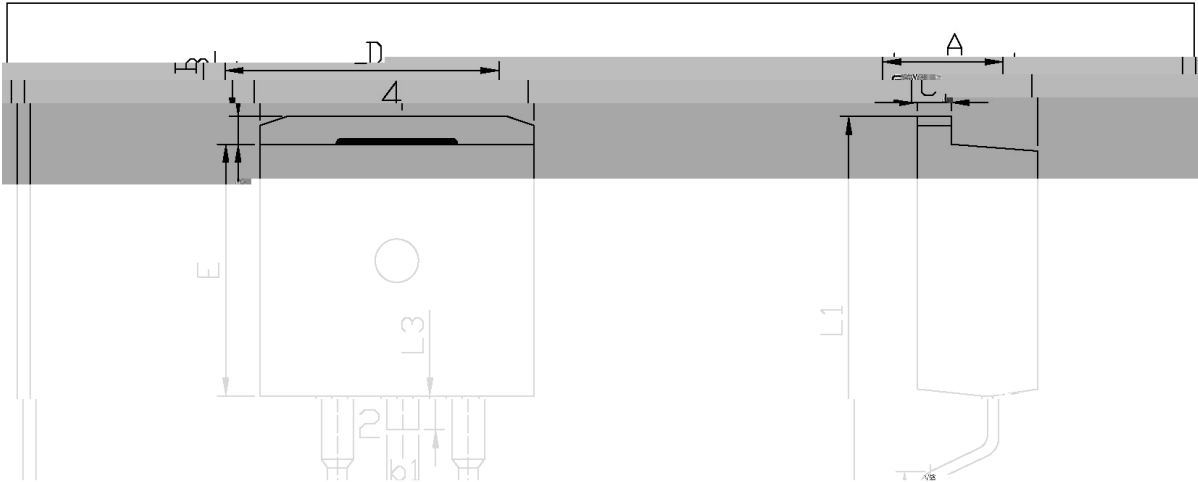


Figure 3: On-Resistance vs. Drain Current and Gate

Figure 4: On-Resistance vs. Junction



/ Package Dimensions

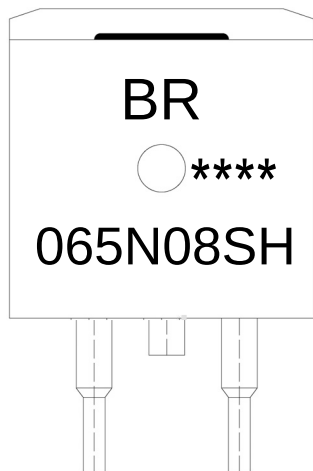


Max		Min		Max		Min	
9.40		A		4.70		E	
2.74		B		1.40		e1	
8.00	16.00	b1	1.15	1.35	L1	15	4.28
2.54	2.54	b2	0.40	0.60	L2	2.2	2.2
20	1.60	C	1.20	1.40	L3	1.1	1.1
		D		9.78		10.20	





/ Marking Instructions



Note:

BR: Company Code

065N08SH: Product Type

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

