

BRCS035N08SHBD

Rev.A Feb.-2023

TO-263

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/ Absolute Maximum Ratings(Ta=25)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	80	V
Drain Current		$I_D(T_c=25)$	195	A
Pulsed Drain Current		I_{DM}	400	A
Gate-Source Voltage		V_{GS}	± 20	V
Single Pulsed Avalanche Energy L=0.5mH		E_{AS}	1200	mJ
Avalanche Current		I_{AS}	47.5	A
Total Power Dissipation		$P_D(T_c=25)$	227	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	$t \leq 10s$	$R_{\theta JA}$	15	/W
	Steady-State		60	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	0.55	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$	$I_D=250 A$	80	94		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=80V$	$V_{GS}=0V$			1	A
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$	$V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$	$I_D=250 A$	2	2.9	4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$	$I_D=30A$		2.9	3.5	m
Forward On Voltage	V_{SD}	$V_{GS}=0V$	$I_S=1A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $f=1MHz$	$V_{GS}=0V$		6350		pF
Output Capacitance	C_{oss}				2440		
Reverse Transfer Capacitance	C_{rss}				305		

/ Electrical Characteristic Curve

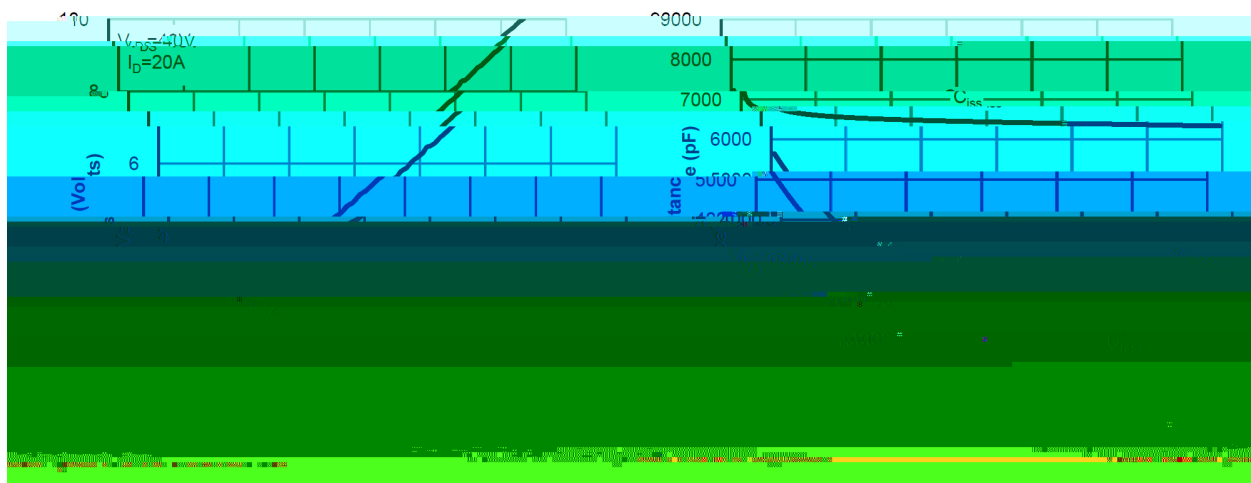
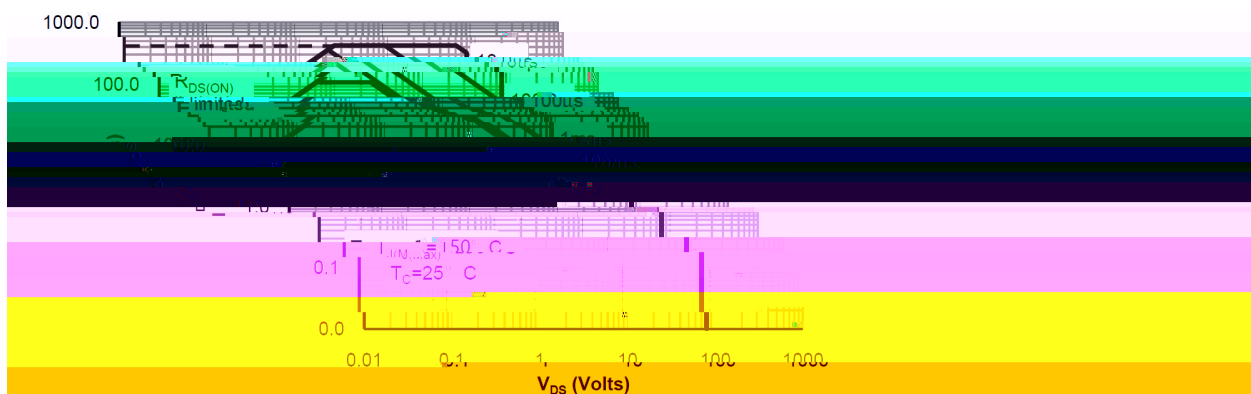
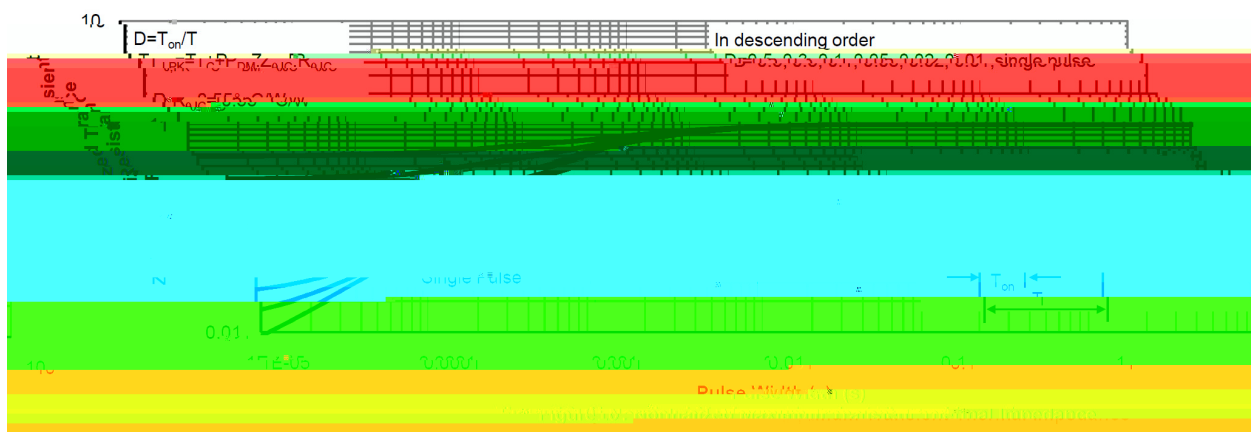


Figure 9: Maximum Forward Biased Safe Operating Area



() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

1 150 180 60