

BRCS120N03DSC

Rev.A Dec.-2024

/ Descriptions

/ Features

$V_{DS}(V)=30V$ $I_D=12.3A$

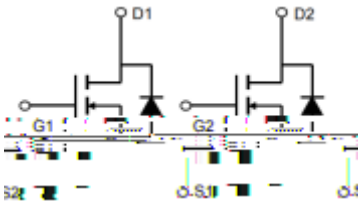
$R_{DS(ON)}@10V<12m$ (Typ. 8.7m)

$R_{DS(ON)}@4.5V<20m$ (Typ. 11.5m)

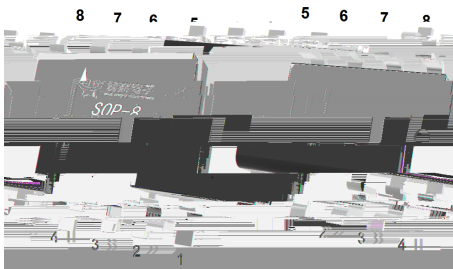
HF Product.

/ Applications

/ Equivalent Circuit



/ Pinning



PIN 1	S1	PIN 2	G1	PIN 3	S2	PIN 4	G2
PIN 5	D2	PIN 6	D2	PIN 7	D1	PIN 8	D1

/ Marking

See Marking Instructions.

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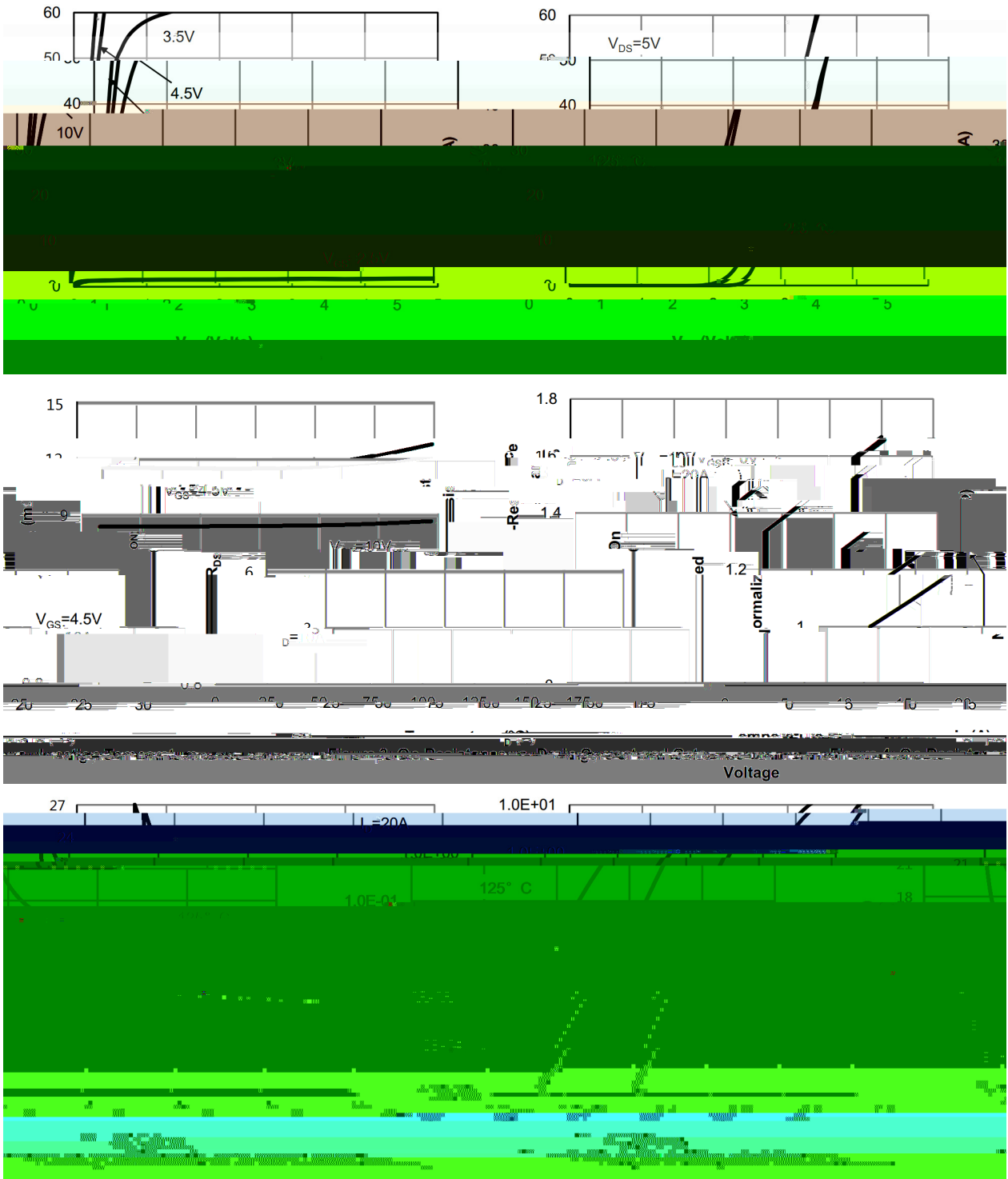
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	12.3	A
Pulsed Drain Current	I_{DM}	46.5	A
Power Dissipation	P_D	3	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	
Maximum Junction-to-Ambient	$R_{JA}(\text{Steady-State})$	41.7	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250$ A	30	36.5		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V$ $V_{GS}=0V$			1	A
Gate-Body leakage current	I					

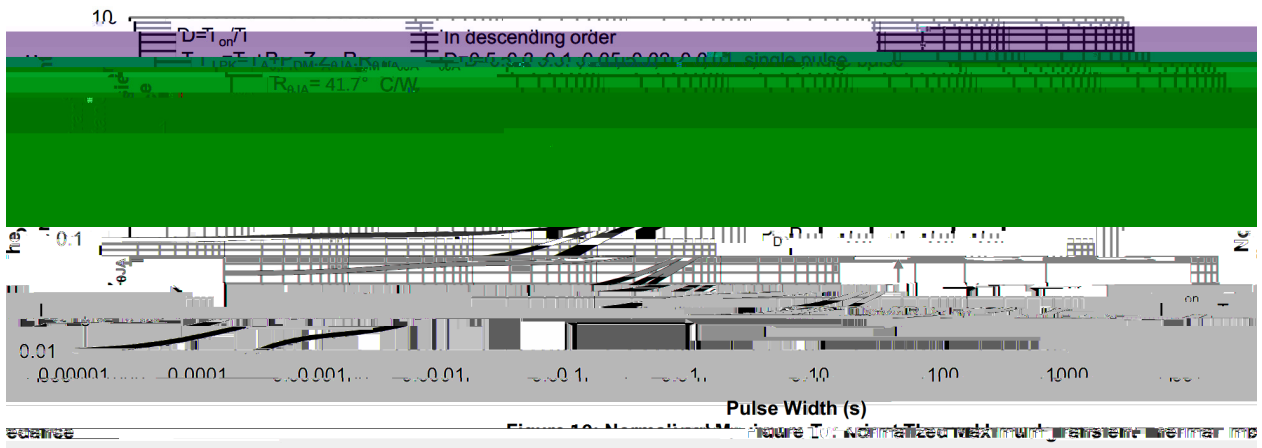
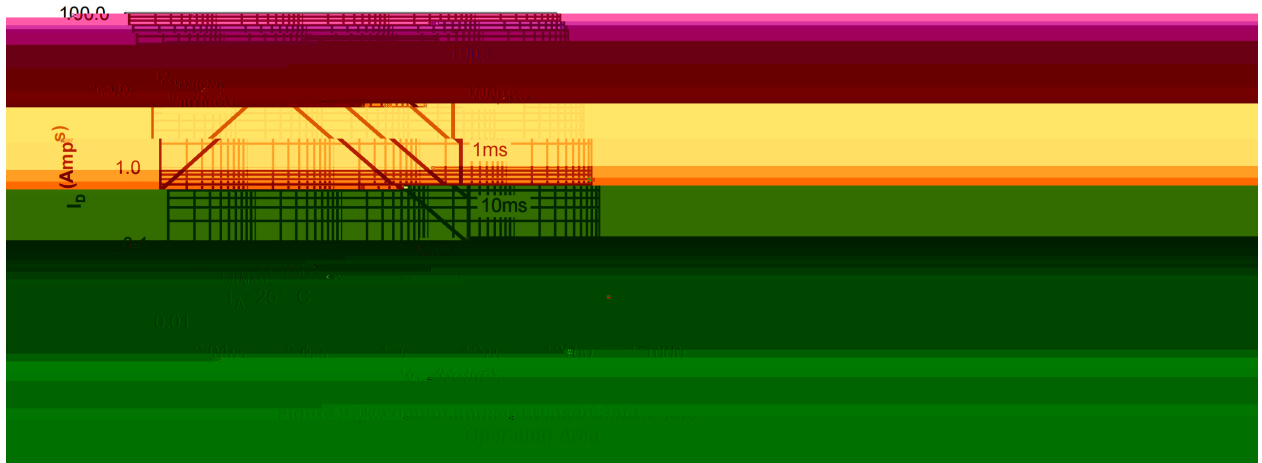
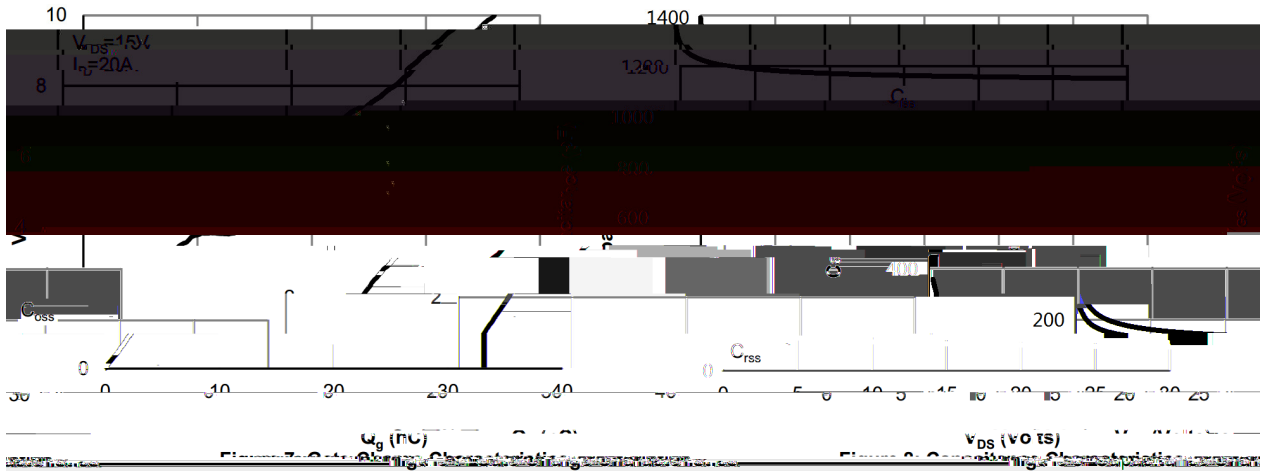
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=15\text{ V}$ $V_{GS}=10\text{V}$ $R_L=0.75$ $R_{GEN}=3$		11		ns
Turn-On Rise Time	t_r			14		ns
Turn-Off Delay Time	$t_{d(off)}$			38		ns
Turn-Off Fall Time	t_f			10		ns

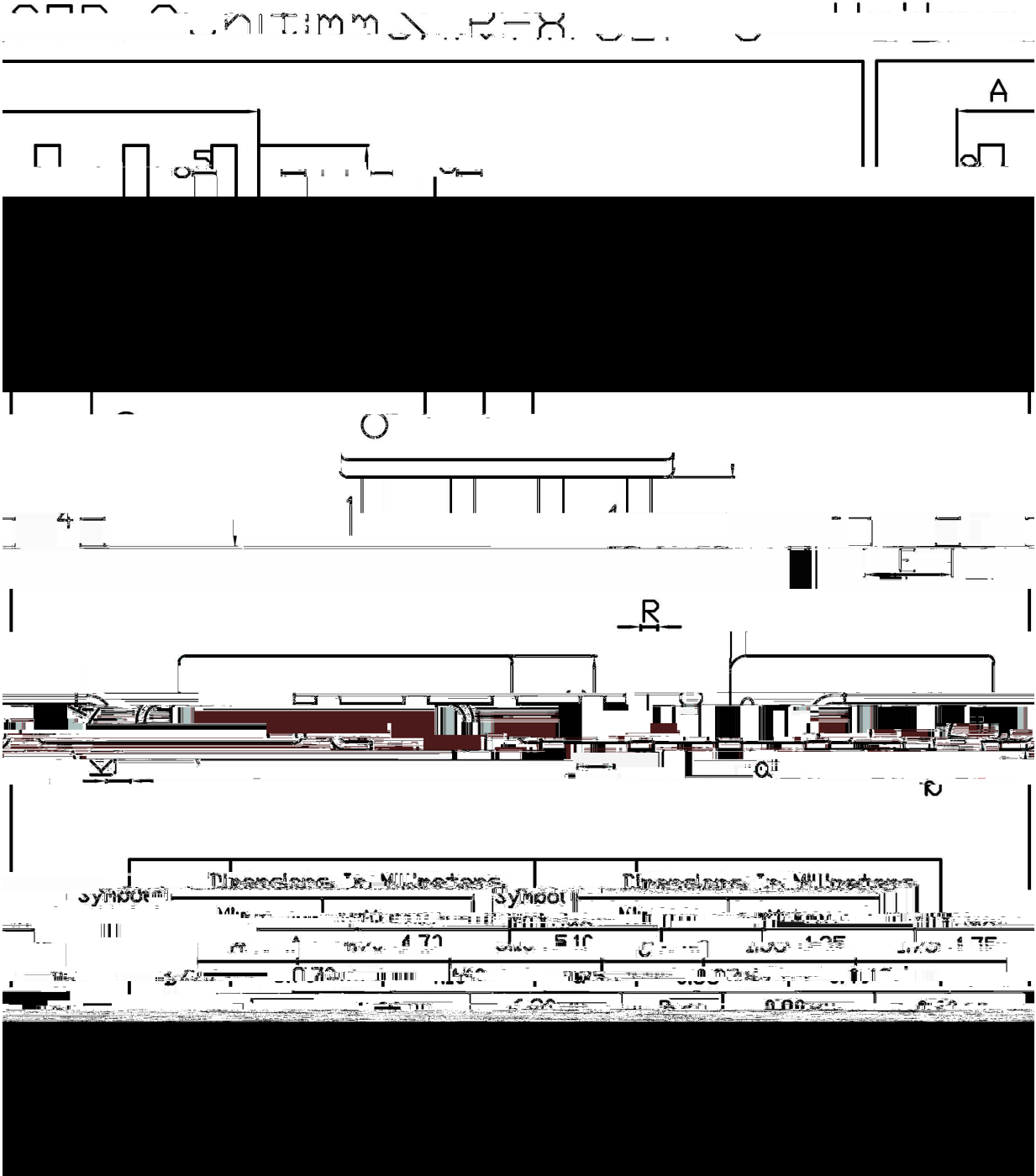
/ Electrical Characteristic Curve



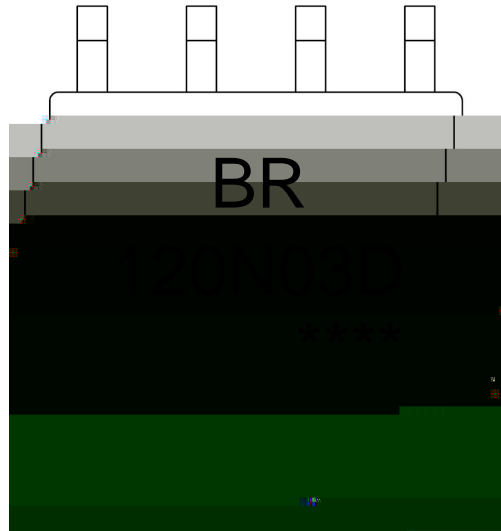
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

120N03D

Note:

BR: Company Code

120N03D: Product Type Code

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

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