BRCS5N10MC

Rev.E Apr.-2024

DATA SHEET

SOT23-3 N

N- CHANNEL MOSFET in a SOT23-3 Plastic Package.

V_{DS}=100V I_D=5A

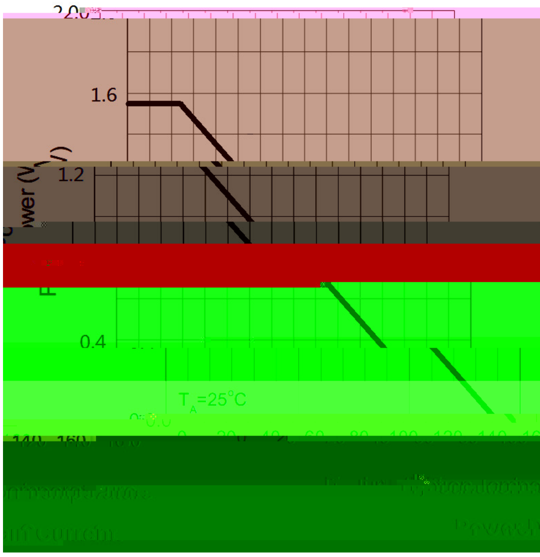
$R_{DS(on)1}$@10V ≤ 175mΩ(Type.120mΩ)

$R_{DS(on)2}$@4.5V ≤ 235mΩ(Type.150mΩ)

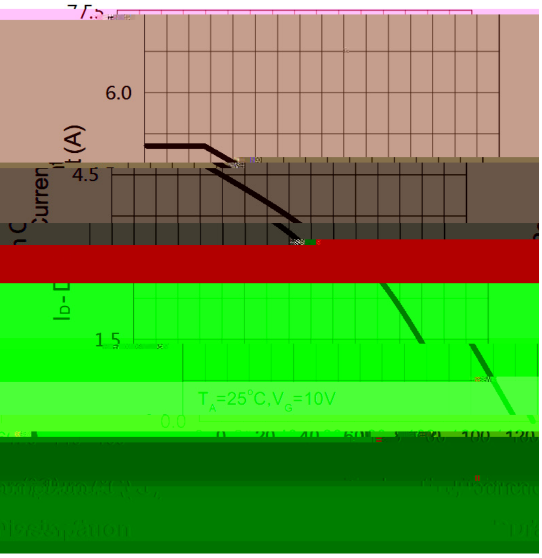
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	100	V
Gate-Source Voltage	V_{GSS}	±20	V
Maximum Drain Current - Continuous	I_D	5.0	A
Drain Current- Pulsed	I_{DM}	15	A
Power Dissipation	P_D	1.55	W
Maximum Junction Temperature	T_J	150	
Storage Temperature Range	T_{STG}	-55 to 150	
Maximum Resistance –Junction to Ambient	$R_{\theta JA}$	80.7	/W

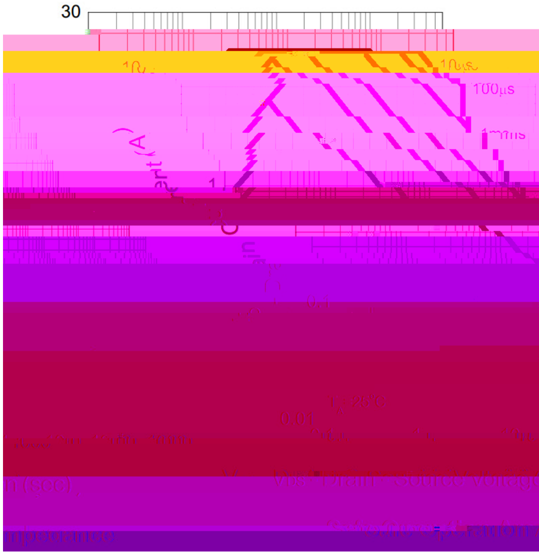
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_{DS}=250μA	100			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V V_{GS}=0V			1	μA
Gate–Body Leakage.	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±10	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS} I_{DS}=250μA	1		3	V
Static Drain–Source On–Resistance	$R_{DS(on)(1)}$	V_{GS}=10V I_D=5A		120	175	mΩ
	$R_{DS(on)(2)}$	V_{GS}=4.5V I_D=2A		150	235	mΩ
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_F=1A			1.3	V
Input Capacitance	C_{iss}	V_{DS}				

/ Electrical Characteristic Curve

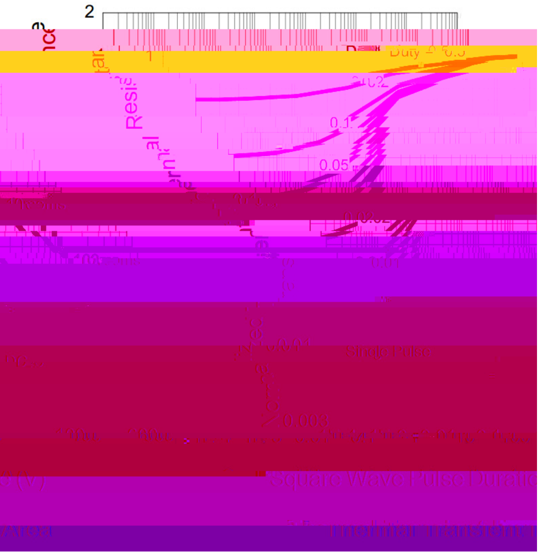


Power Dissipation

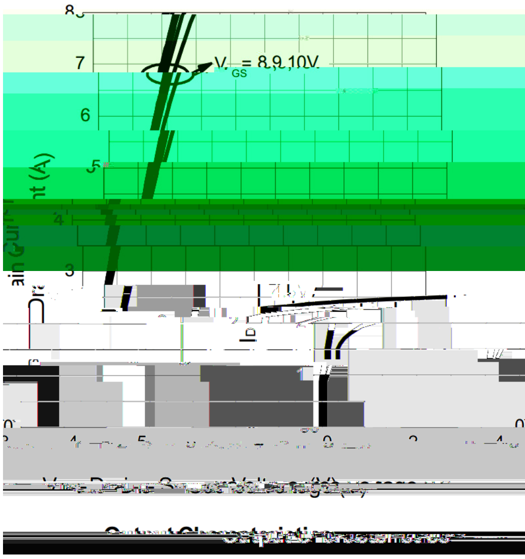




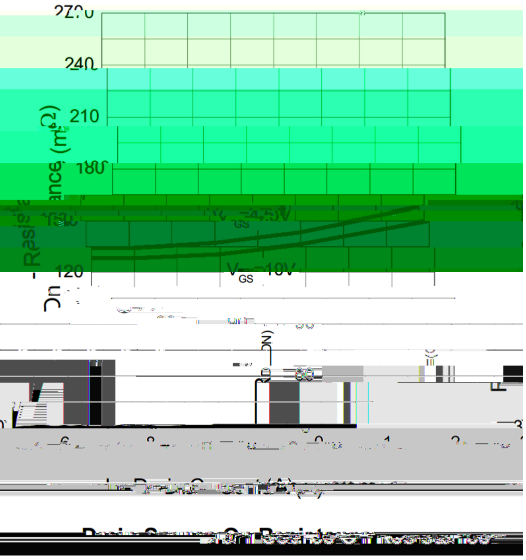
Safe Operation Area



Thermal Transient Impedance

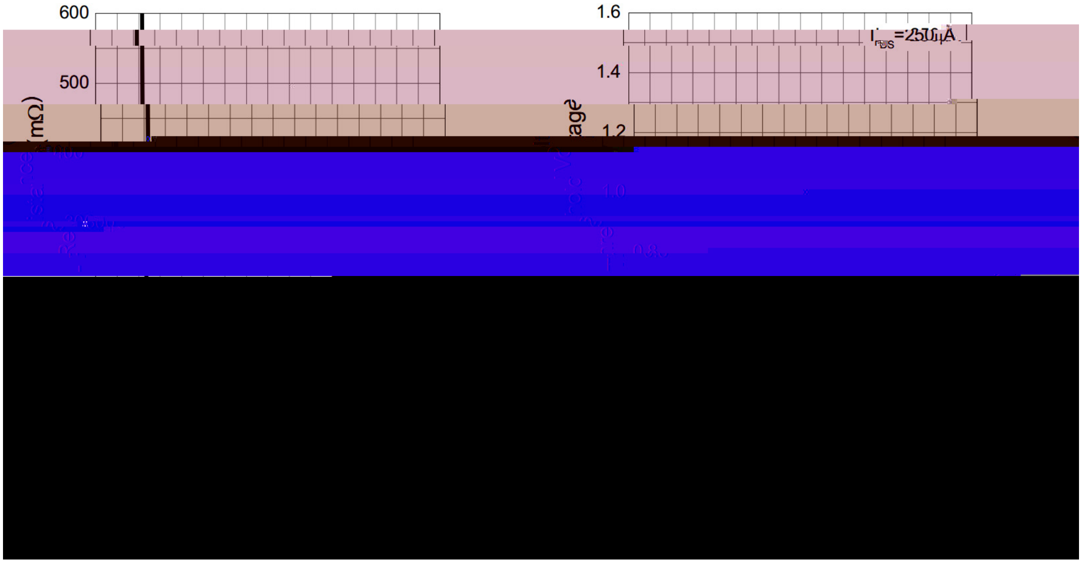


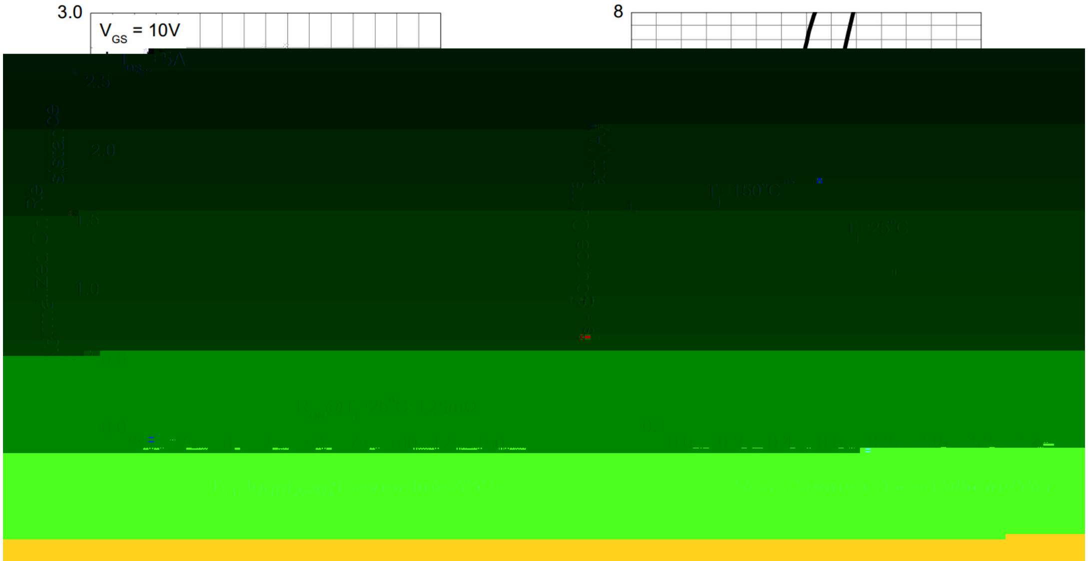
Output Characteristics

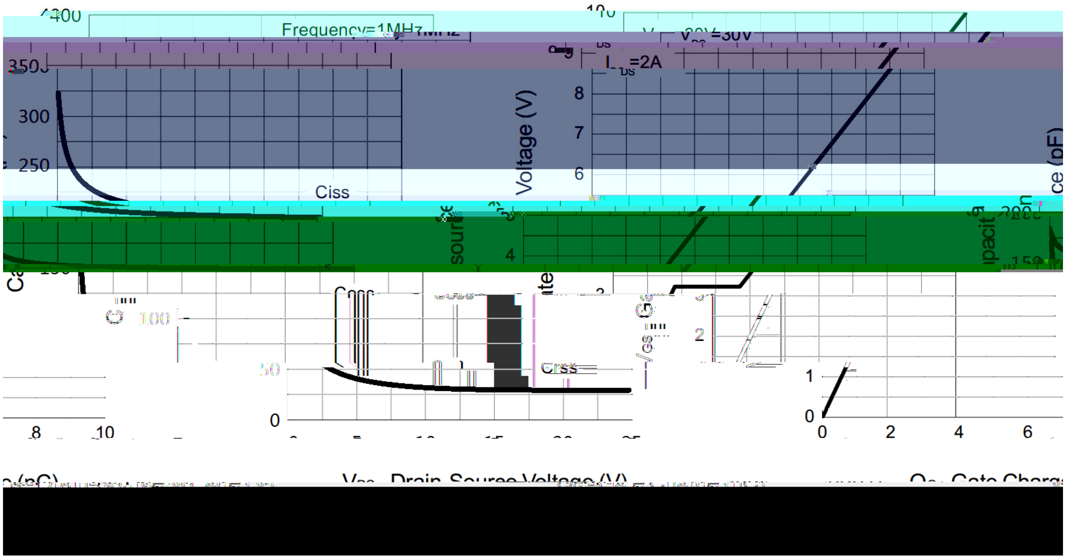


Drain-Source On-Resistance

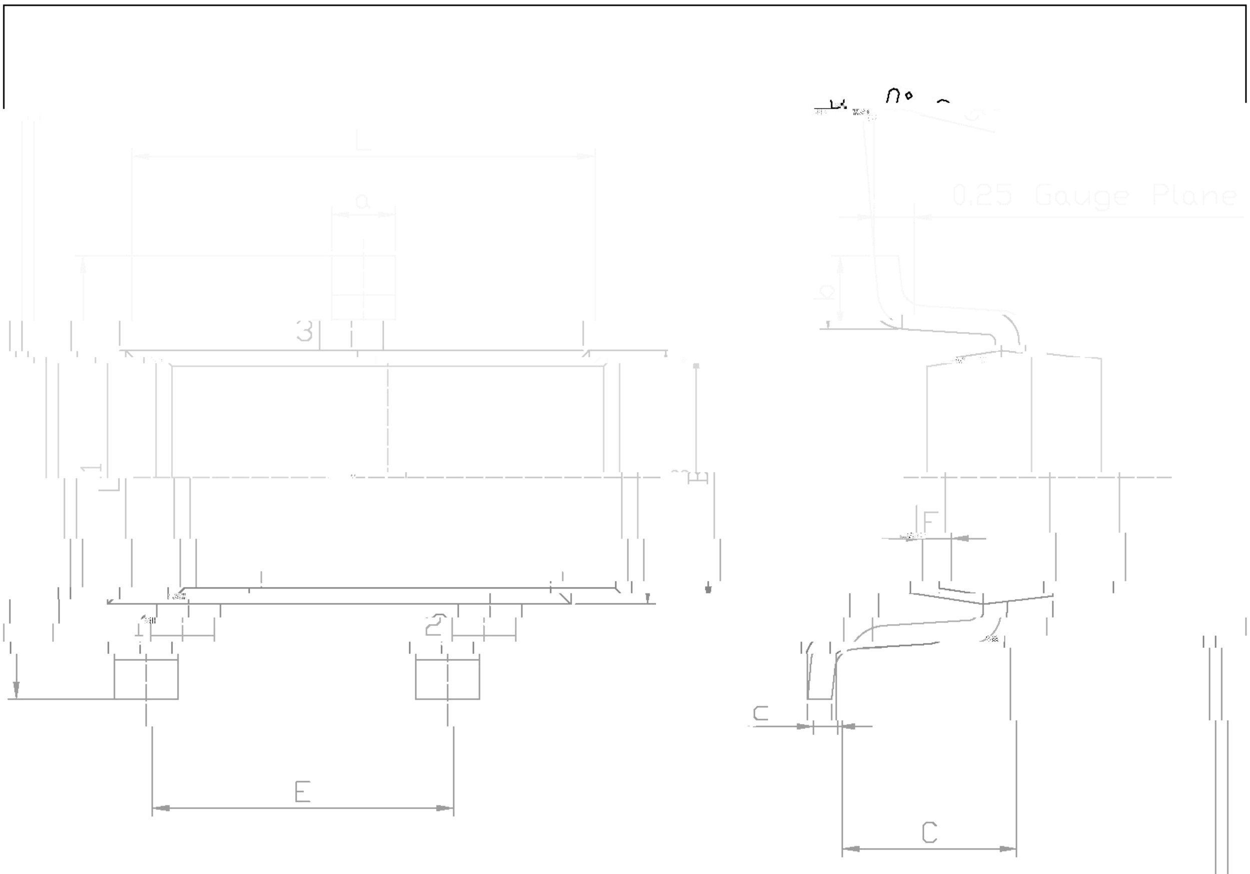
/ Electrical Characteristic Curve





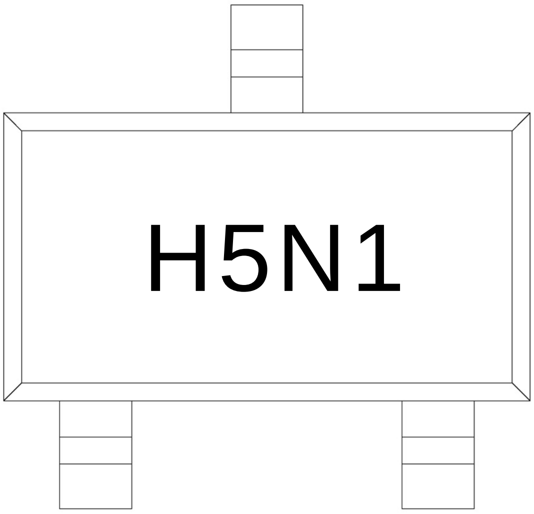


/ Package Dimensions



Unit: mm

/ Marking Instructions



H:

5N1

Note:

H	Company Code
5N1:	Product Type Code

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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)