

BRCS200P012MC

Rev.A Jun.-2023

/ Descriptions

SOT23-3 P MOS

- CHANNEL MOSFET in a SOT23-3 Plastic Package.

/ Features

$V_{DS} (V) = -12V$ $I_D = -8.0A$

$R_{DS(ON)} @ -10V$ 20m (Type.18m)

$R_{DS(ON)} @ -4.5V$ 25m (Type.21m)

$R_{DS(ON)} @ -2.5V$ 30m (Type.27m)

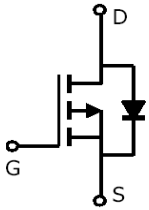
$R_{DS(ON)} @ -1.8V$ 50m (Type.40m)

HF Product.

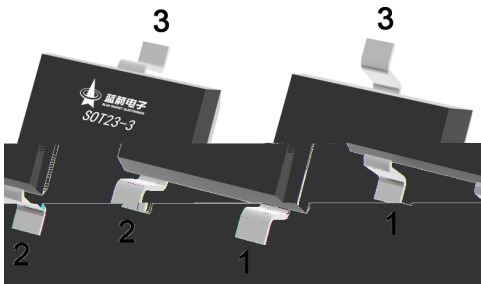
/ Applications

PWM applications, Load switch, Power management.

/ Equivalent Circuit



/ Pinning



PIN1 G

PIN 2 S

PIN 3 D

/ Marking

See Marking Instructions.

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Rev.A Jun.-2023



DATA SHEET

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-12	V
Gate-Source Voltage	V_{GSS}	± 8	V
Continuous Drain Current	$I_D(T_C=25^\circ\text{C})$	-8.0	A
Pulsed Drain Current	I_{DM}	-25	A
Power Dissipation for Single Operation	$P_D(T_C=25^\circ\text{C})$	1.8	W
Maximum Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	
Thermal Resistance-Junction to Ambient	R_{JA}	125	/W
Thermal Resistance-Junction to Case	R_{JC}	69	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=-250\mu\text{A}$ $V_{GS}=0\text{V}$	-12	-17.5		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-12\text{V}$ $V_{GS}=0\text{V}$			-1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}$ $V_{GS}=\pm 8\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu\text{A}$	-0.5	-0.6	-1.0	V

VTON2 0 0 7.02 280.98 354.3809.92.01727f .57742.3003 Tm .3.4377 7(0455.36(0 0 10.5 290.7 354.8603 Tm 055-

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Rev.A Jun.-2023

/ Electrical Characteristic Curve

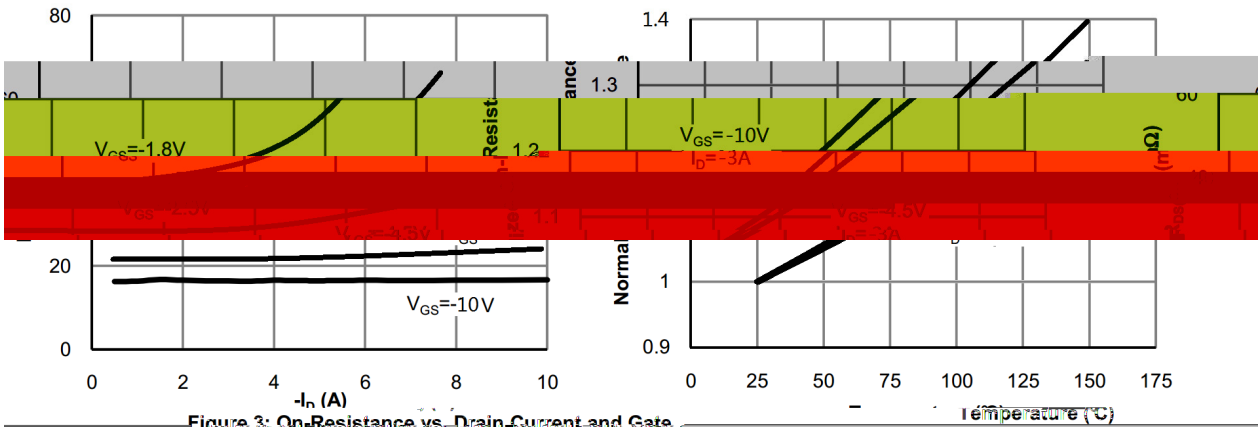
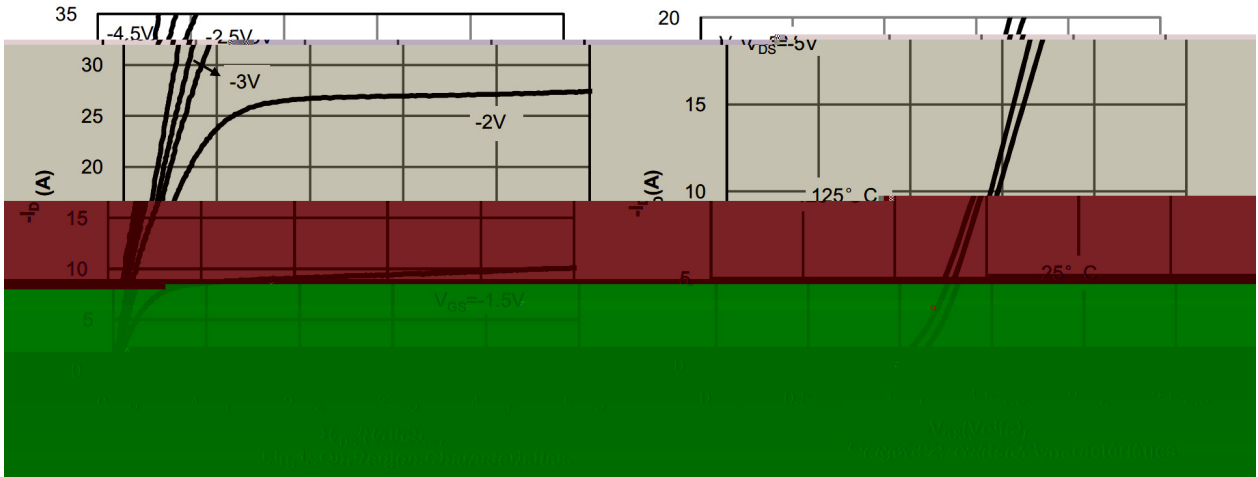


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

Figure 4: On-Resistance vs. Junction Temperature

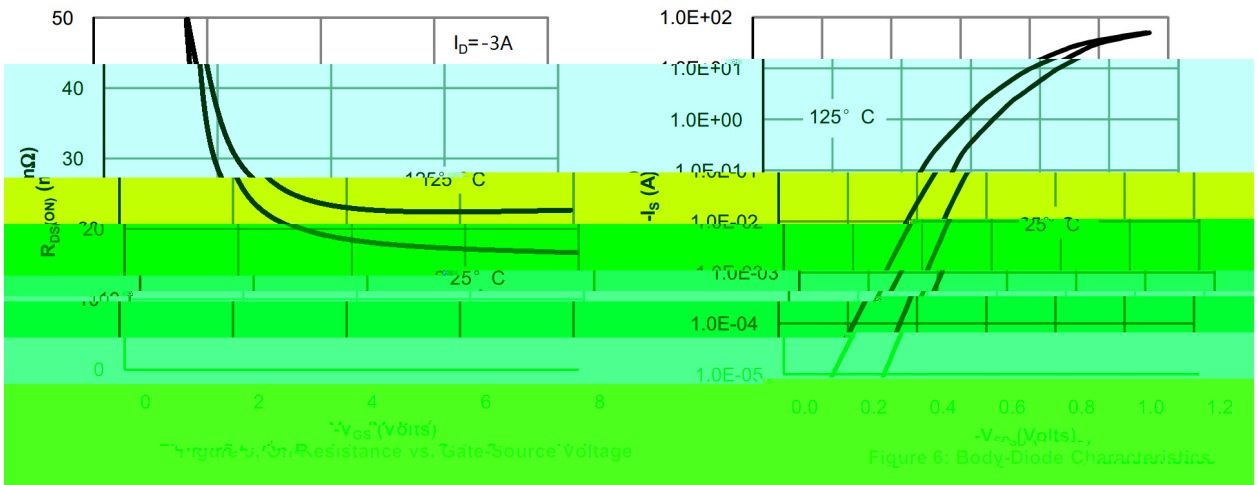
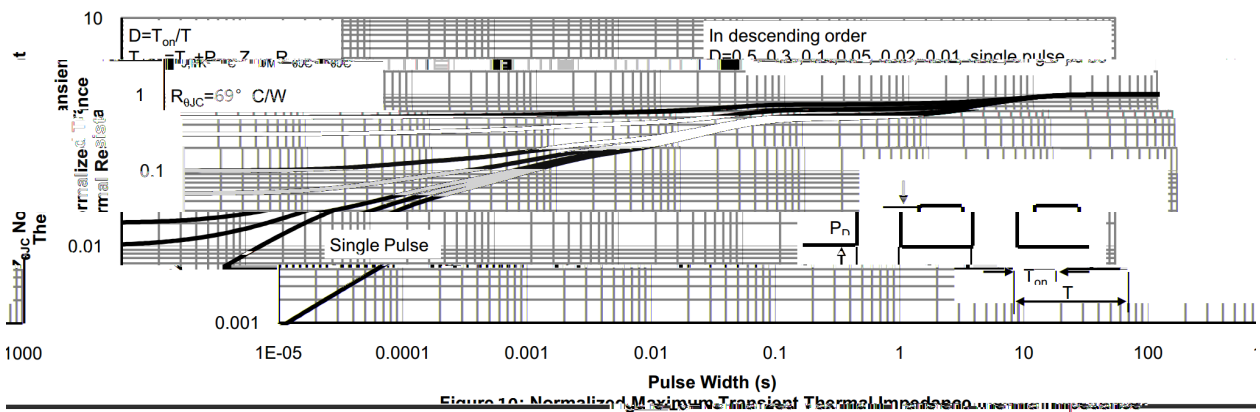
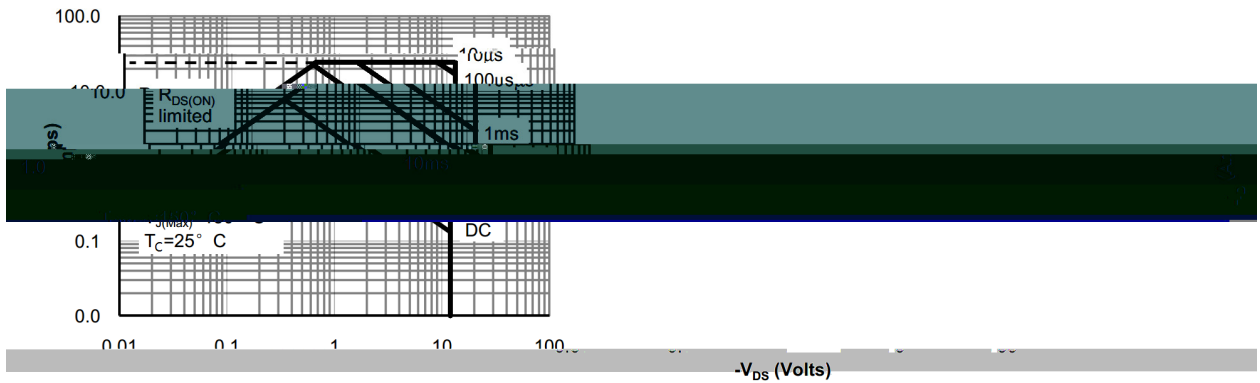
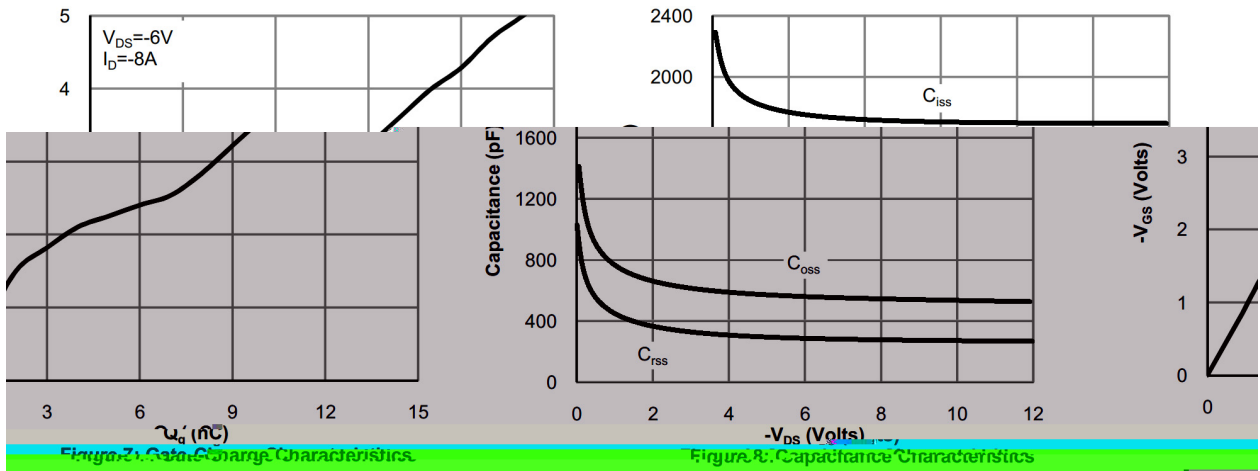


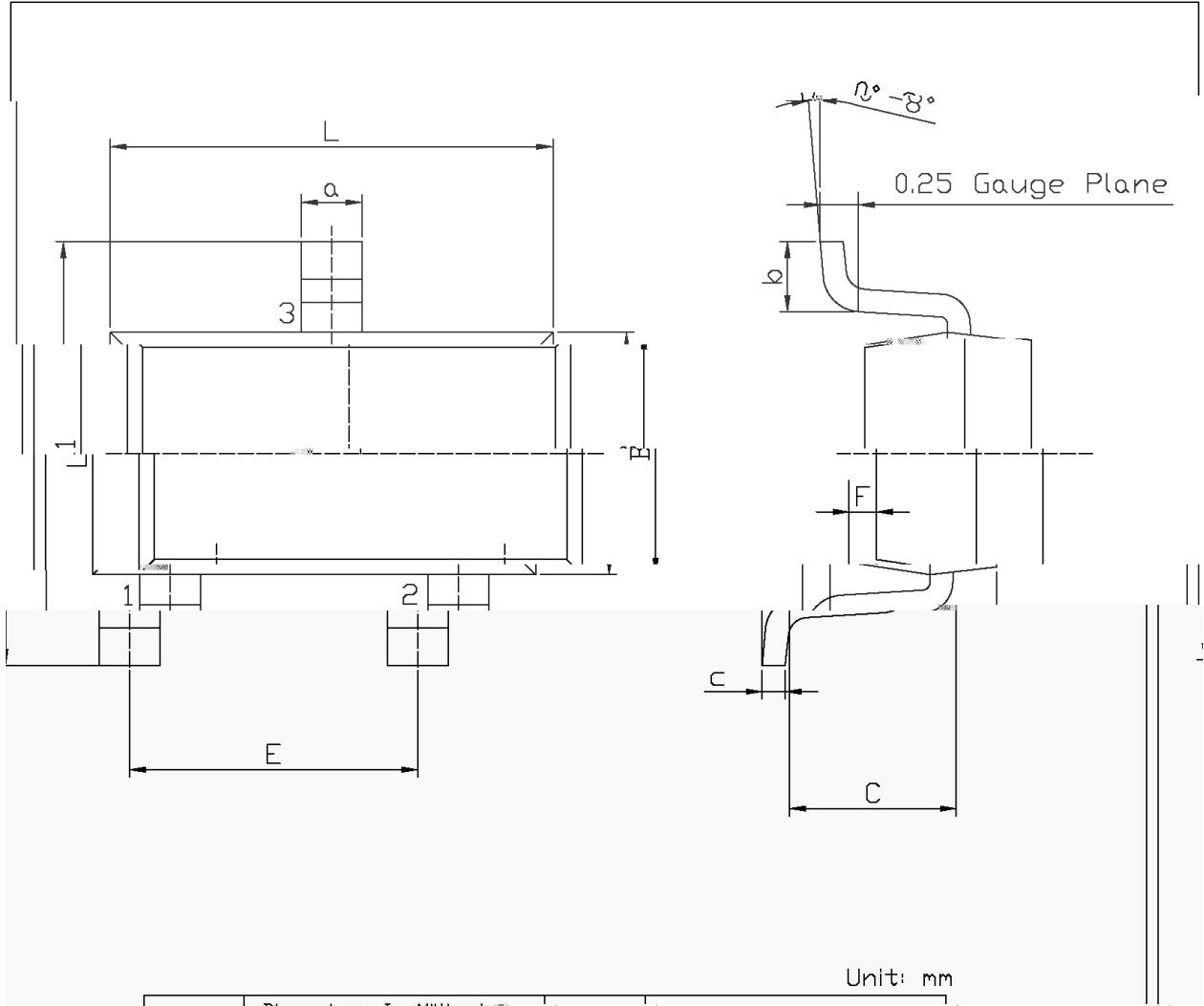
Figure 5: Forward Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

/ Electrical Characteristic Curve

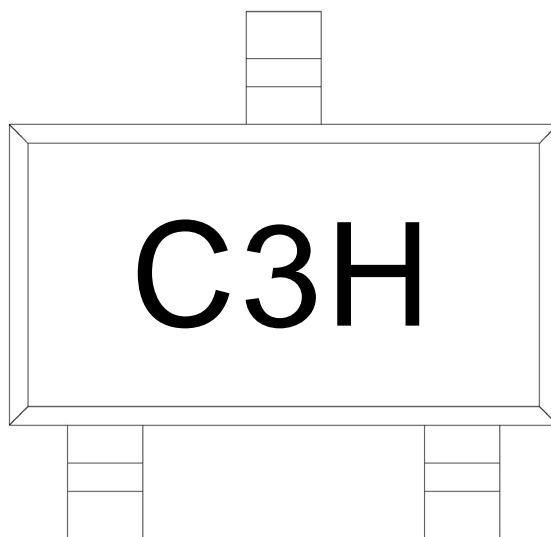


/ Package Dimensions



Dimension	Min	Max	Dimension	Min	Max
L	2.92	3.02	a	0.55	0.55
B	1.50	1.70	C	0.10	0.20
C	0.90	1.30	b	0.35	0.55
L1	2.60	3.00	F	0	0.15
E	1.80	2.00			

/ Marking Instructions



C3

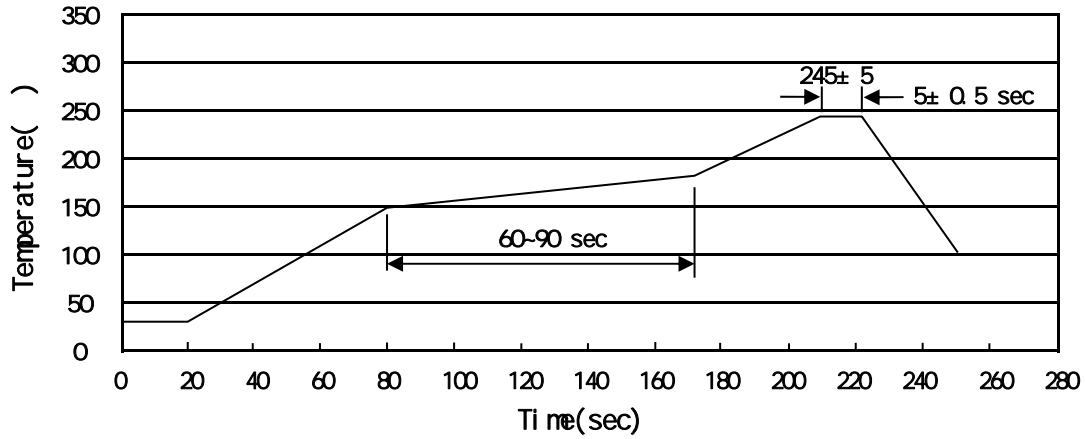
H

Note:

C3: Product Type Code

H: Company Code

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



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)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT23-3	3,000	10	30,000	4	120,000	7 x8	210x205x205	445x435x230

/ Notices