

BRCS1C5P06MF

Rev.A Oct.-2022

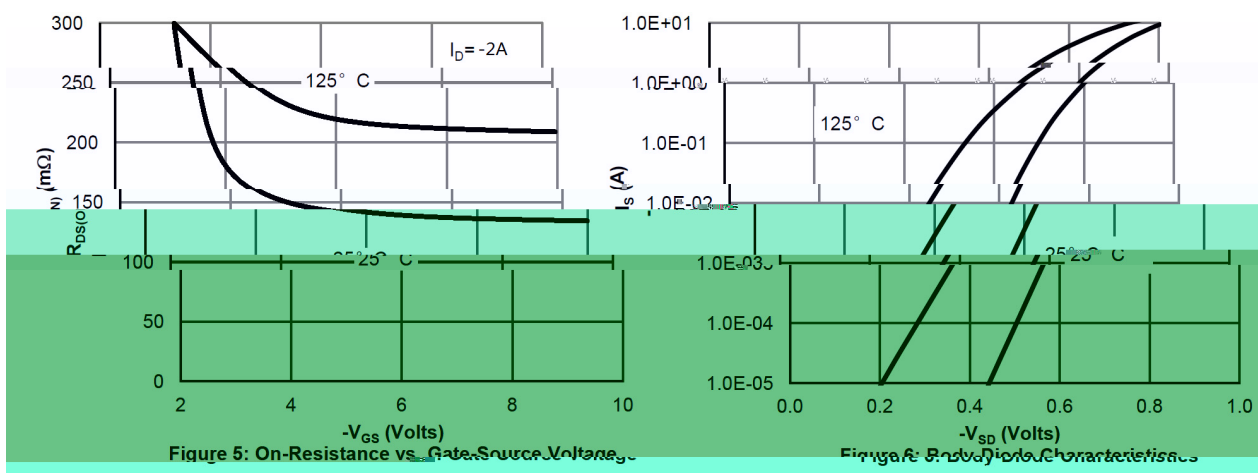
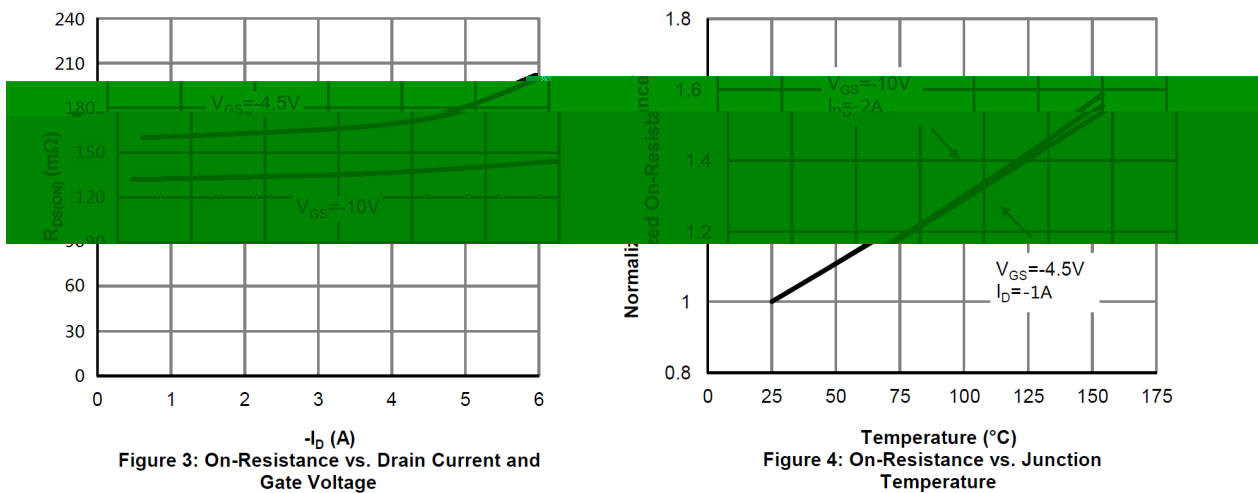
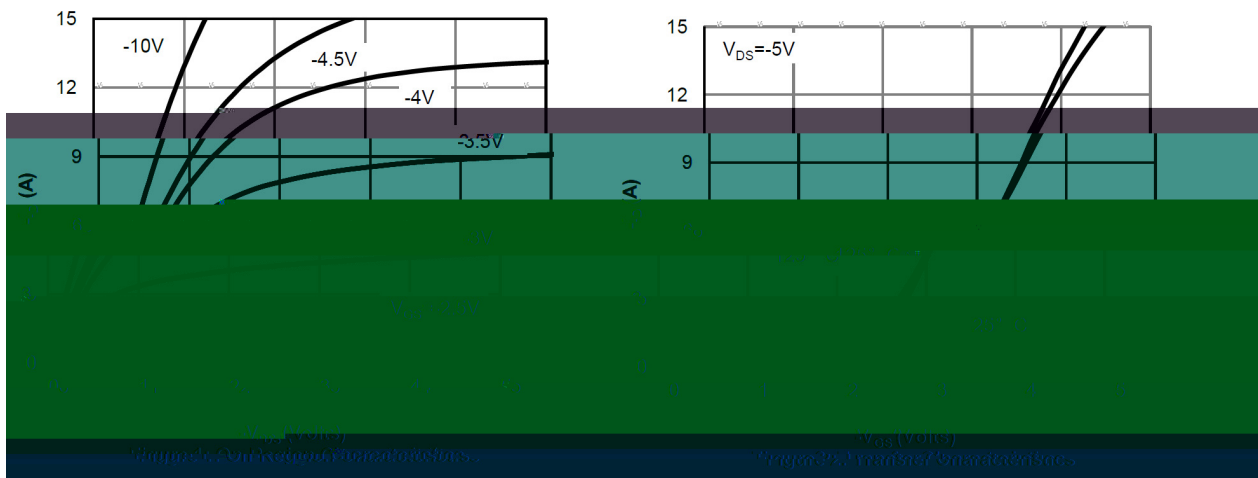
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-60	V
Gate-Body Leakage Voltage		V_{GSS}	± 20	V
Drain Current – Continuous		I_D	-2.3	A
Pulsed Drain Current		I_{DM}	-9	A
Power Dissipation		P_D	1.25	W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 150	
Maximum Junction-to-Ambient	$t \leq 10s$	$R_{\theta JA}$	72	/W
Maximum Junction-to-Ambient	Steady-State		100	/W
Maximum Junction-to-Lead	Steady-State	$R_{\theta JL}$	64	/W

/ Electrical Characteristics($T_a=25^\circ\text{C}$)

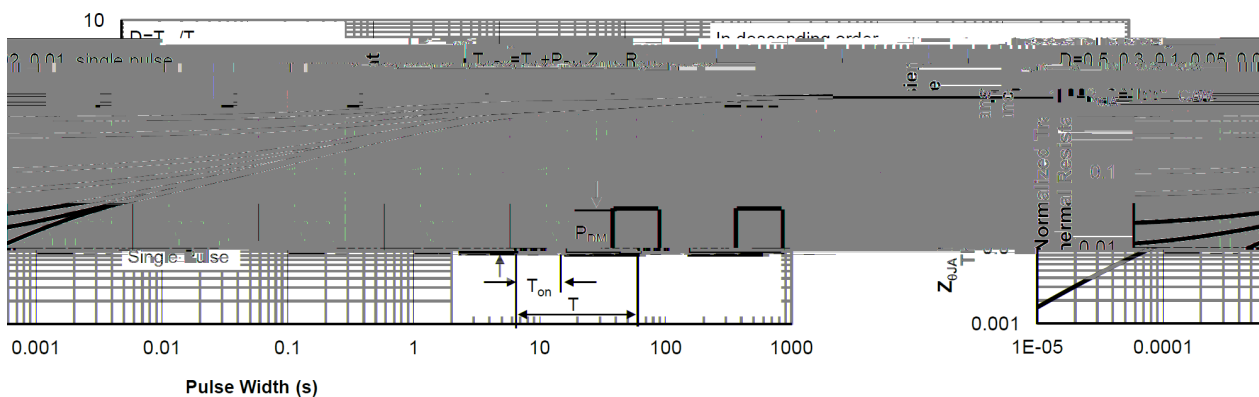
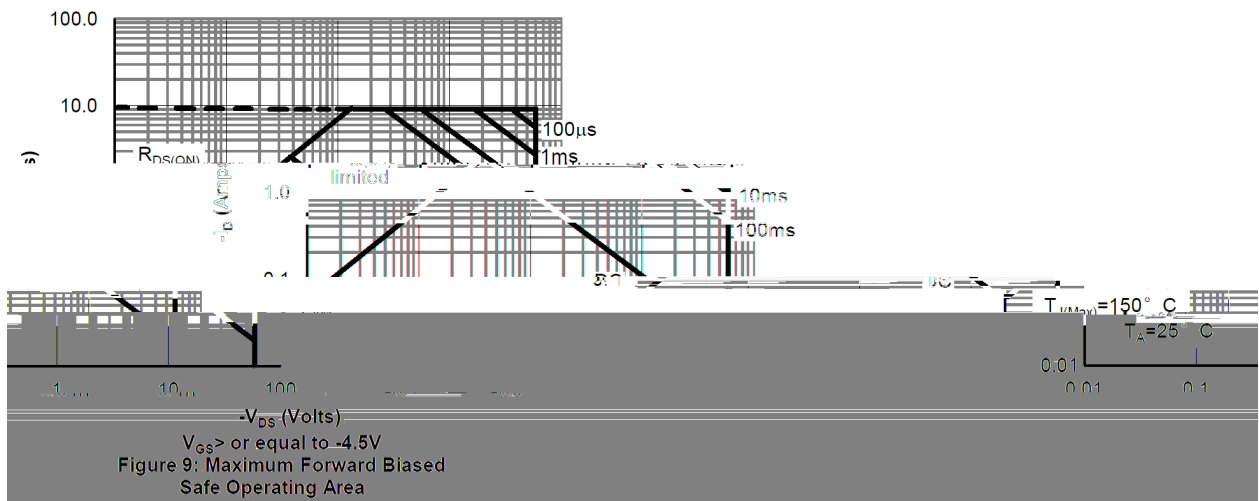
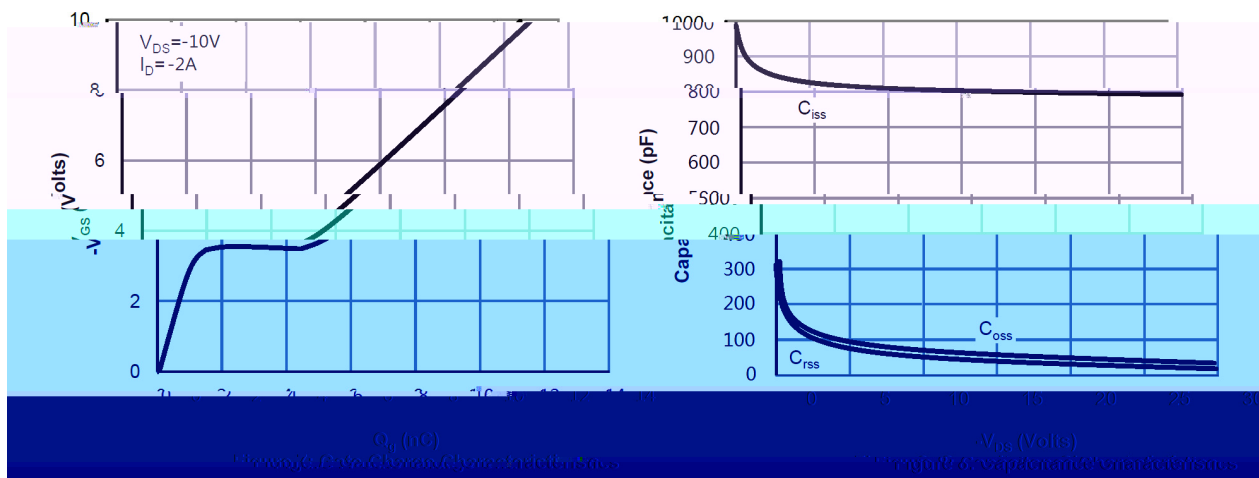
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V$ $I_D=-250\mu A$	-60	-75		V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-1	-1.9	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V$ $I_D=-2A$		135	150	m Ω
		$V_{GS}=-4.5V$ $I_D=-1A$		160	200	m Ω
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-60V$ $V_{GS}=0V$			-1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 100	nA
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=-1A$ $T_J=25$			-1.2	V
Gate resistance	R_g	$f=1MHz$		6.5		Ω
Input Capacitance	C_{iss}	$V_{DS}=-25V$ $V_{GS}=0V$ $f=1.0MHz$		800		pF
Output Capacitance	C_{oss}			45		
Reverse Transfer Capacitance	C_{rss}			35		
Total Gate Charge	$Q_{g(-10V)}$	$V_{DS}=-10V$ $V_{GS}=-10.0V$ $I_D=-2A$		12.3		nC
Total Gate Charge	$Q_{g(-4.5V)}$			6.3		
Gate-to-Source Charge	Q_{gs}			1.6		
Gate-to-Drain Charge	Q_{gd}			2.4		
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=-10V$ $R_L=5.4\Omega$ $V_{GS}=-10V$ $R_{GEN}=3\Omega$		12		ns
Turn-On Rise Time	t_r			20		
Turn-Off Delay Time	$t_{d(off)}$			20		
Turn-Off Fall Time	t_f			25		

/ Electrical Characteristic Curve

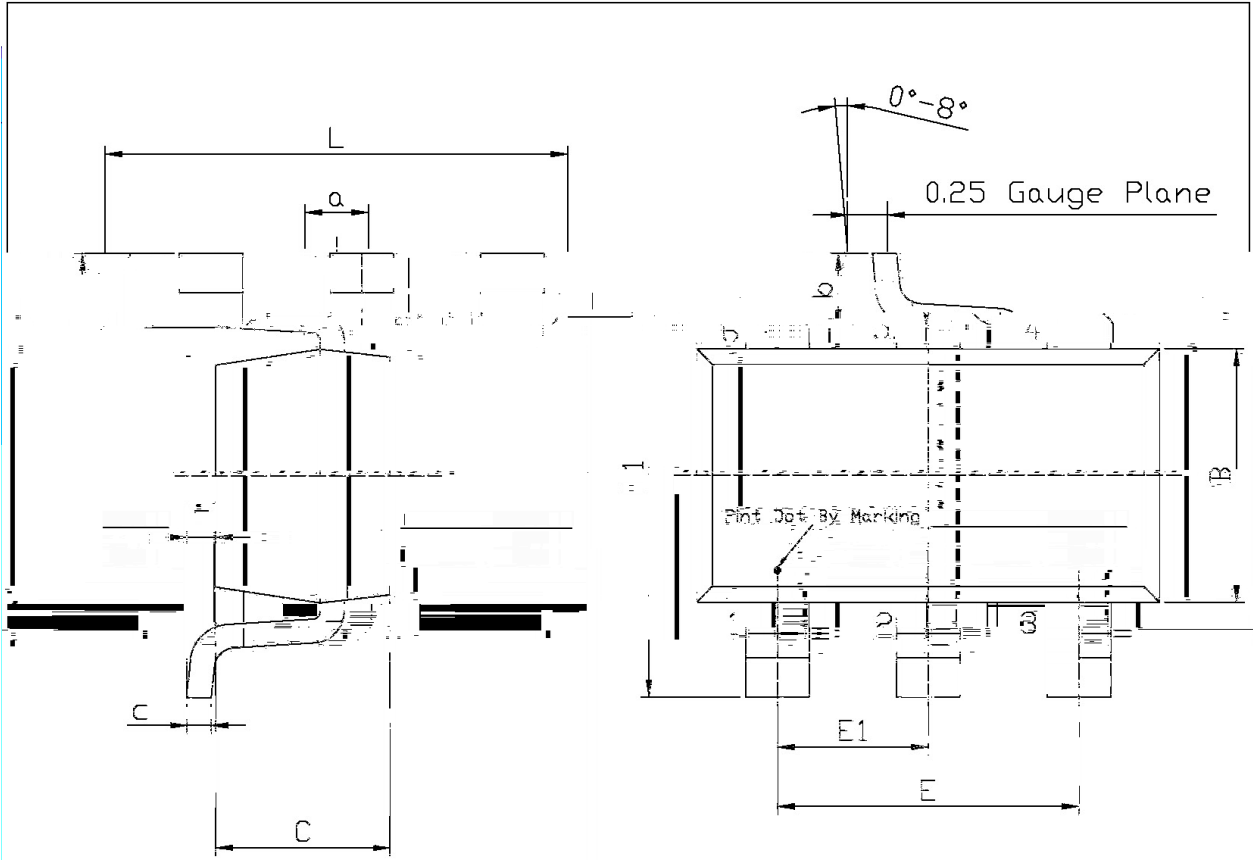




/ Electrical Characteristic Curve



/ Package Dimensions



Unit: mm

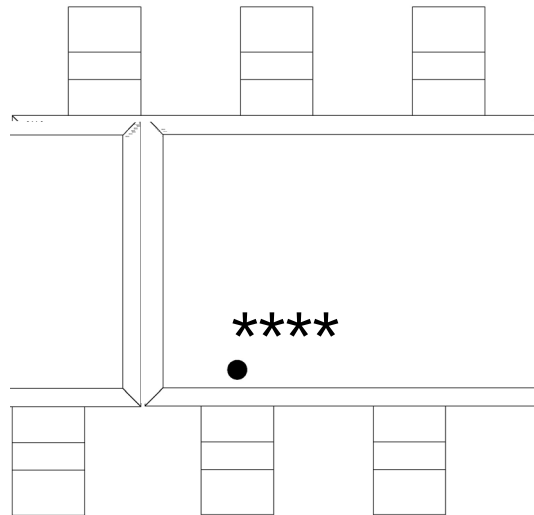
Symbol	Dimensions In Millimeters	
	Min	Max
L1	0.85	1.05
a	0.35	0.50
C	0.10	0.20
b	0.35	0.55
F	0	0.15

Symbol	Dimensions In Millimeters		Symbol
	Min	Max	
L	2.82	3.32	
B	1.50	1.70	
C	0.90	1.30	
L1	2.60	3.00	
E	1.80	2.00	

-6

SOT23-

/ Marking Instructions



2P06:

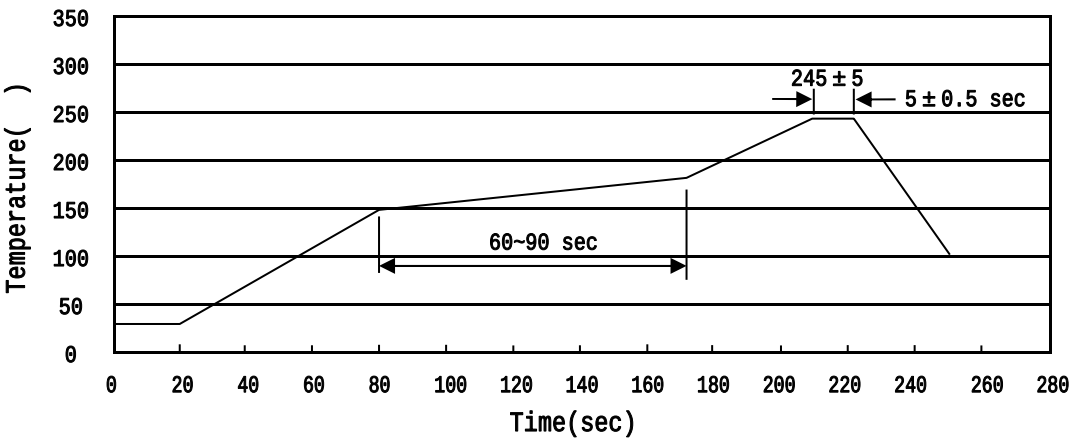
*****.

Note:

2P06 Product Type

*****. 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
SOT23-5/6	3,000	10	30,000	4	120,000	7 ×8	210×205×205	445×230×435

/ Notices