

BRCS2C0P10SC

Rev.A Jul.-2025

/ Descriptions

SOP-8 P MOS

P-Channel Enhancement Mode Field Effect Transistor in a SOP-8 Plastic Package.

/ Features

$V_{DS} (V) = -100V$ $I_D = -5.0A$ ($V_{GS} = \pm 20V$)

$R_{DS(ON)}@-10V \leq 200m\Omega$ (Typ.163m Ω)

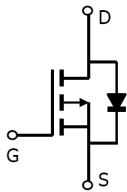
$R_{DS(ON)}@-4.5V \leq 230m\Omega$ (Typ.177m Ω)

HF Product.

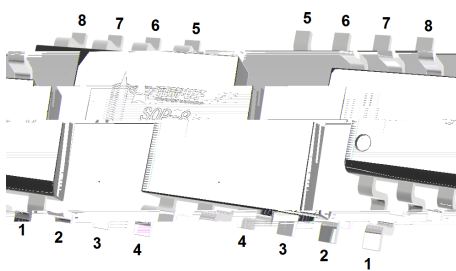
/ Applications

Motor driver appliances, High power inverter system, Adapter appliances.

/ Equivalent Circuit



/ Pinning



PIN1	S	PIN 2	S	PIN 3	S	PIN 4	G
PIN 5	D	PIN 6	D	PIN 7	D	PIN 8	D

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DSS}	-100	V
Drain Current*	I _D	-5.0	A
Drain Current – Pulsed*,**	I _{DM}	-8.0	A
Gate-Source Voltage	V _{GS}	±20	V
Power Dissipation	P _D	1.78	W
Storage Temperature Range	T _{stg}	-55 150	
Thermal Resistance-Junction to Ambient*	R _{θJA}	70	/W

Notes

* Surface Mounted on 1 in² pad area, t ≤ 10 sec

** Pulse width ≤ 300 μs, duty cycle ≤ 2 %

*** limited by bonding wire.

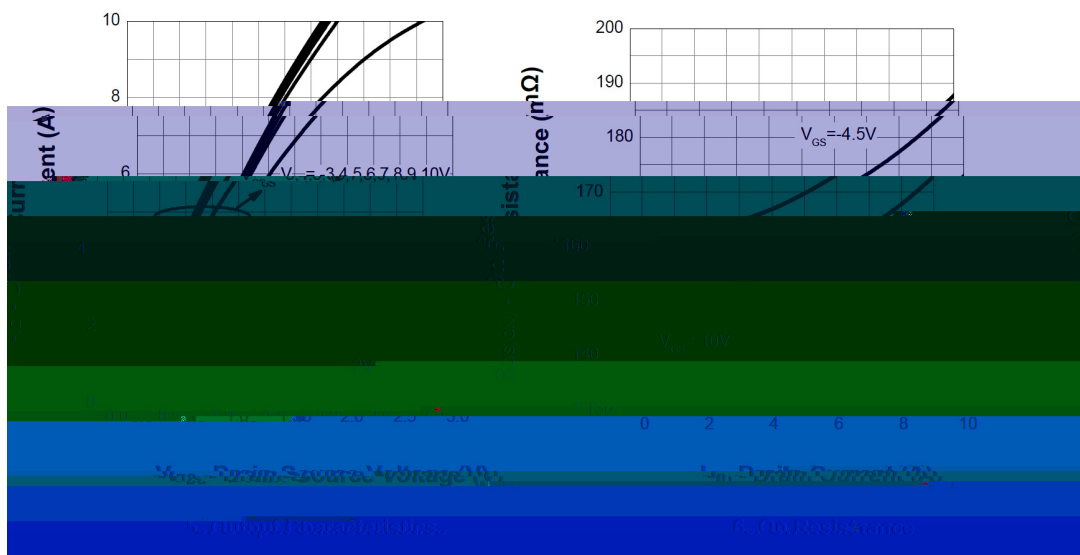
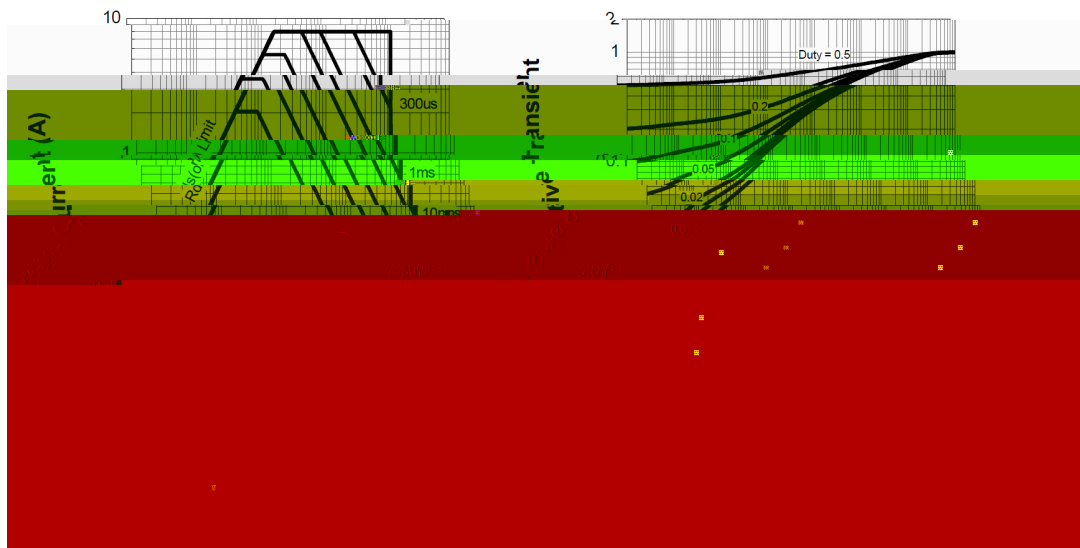
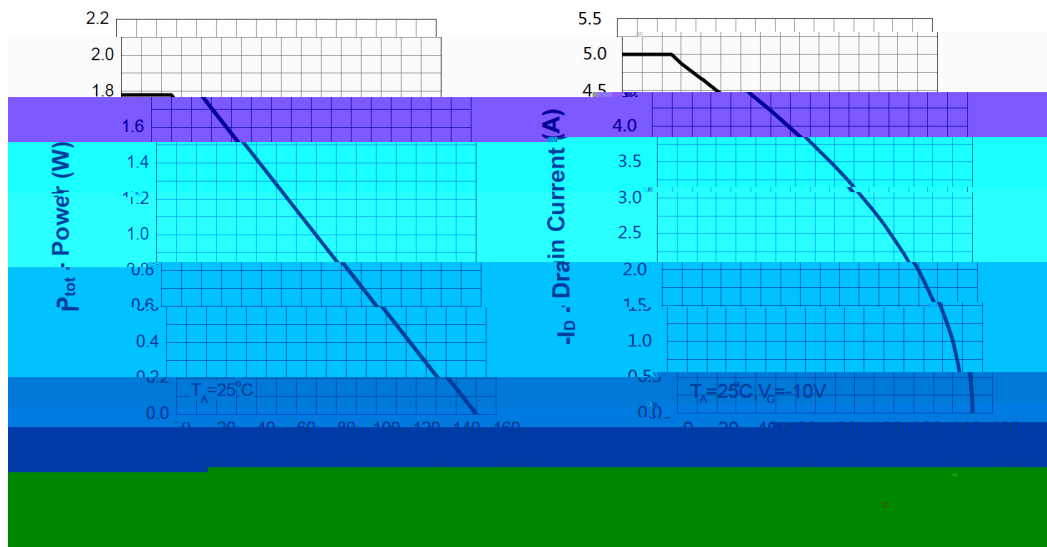
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V I _D =-250μA	-100			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-80V V _{GS} =0V			1.0	μA
Gate-Body Leakage Current Forward	I _{GSS}	V _{GS} =±20V V _{DS} =0V			±0.1	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250μA	-1.0		-2.0	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-10V I _D =-2A		163	200	mΩ
		V _{GS} =-4.5V I _D =-1A		177	230	
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} =0V I _S =-2A			-1.3	V
Input Capacitance	C _{iss}	V _{DS} =-50V V _{GS} =0V f=1.0MHz		1523		pF
Output Capacitance	C _{oss}			37		
Reverse Transfer Capacitance	C _{rss}			34		
Total Gate Charge	Q _g	V _{GS} =-10V V _{DS} =-50V I _D =-2A		29		nC
Gate Source Charge	Q _{gs}			6.2		
Gate Drain Charge	Q _{gd}			3.2		

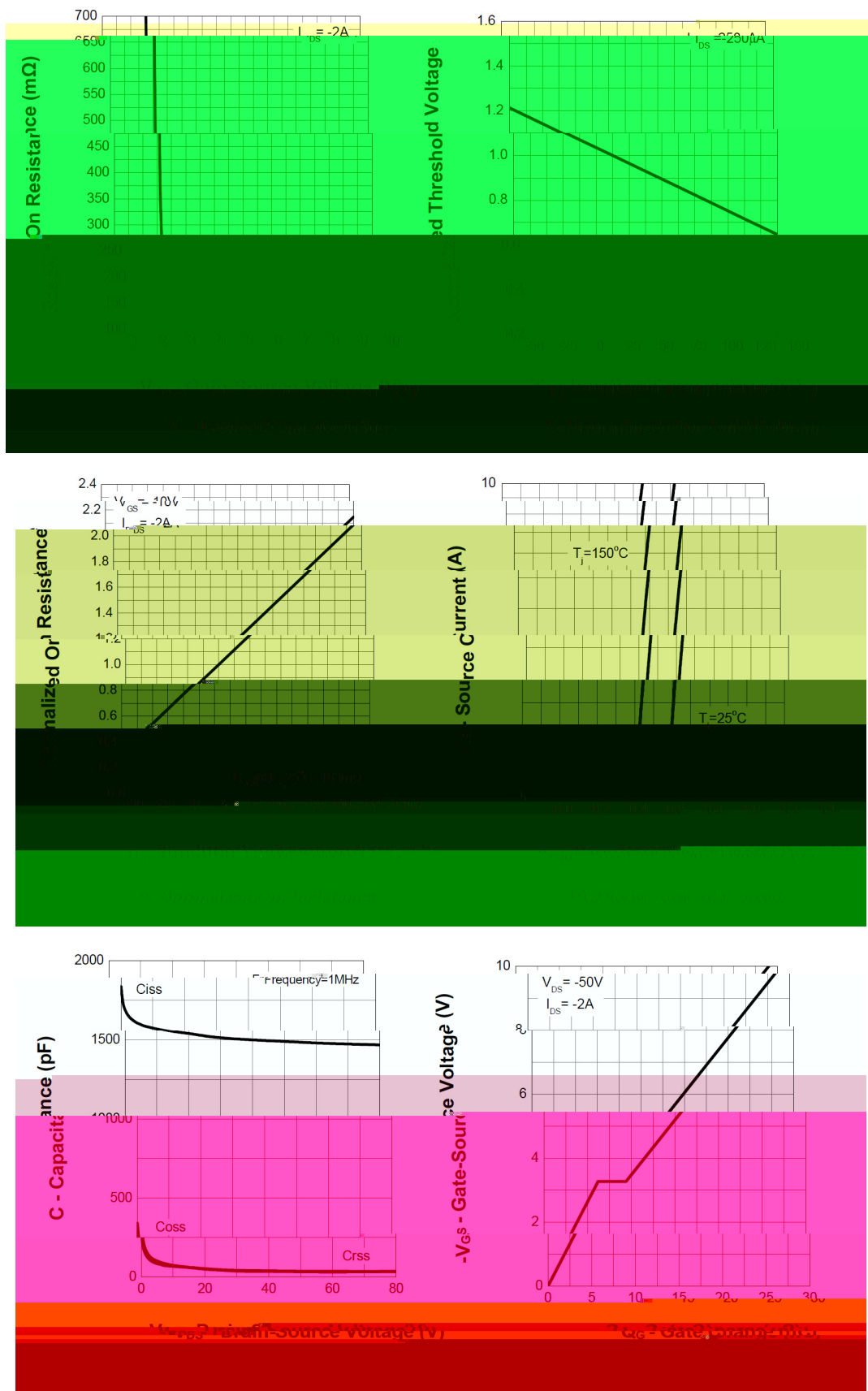
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V$ $V_{DS}=-50V$ $R_L=25\Omega$ $R_G=3.9\Omega$ $I_D=-2A$		11		ns
Turn-On Rise Time	t_r			27		
Turn-Off Delay Time	$t_{d(off)}$			289		
Turn-Off Fall Time	t_f			85		

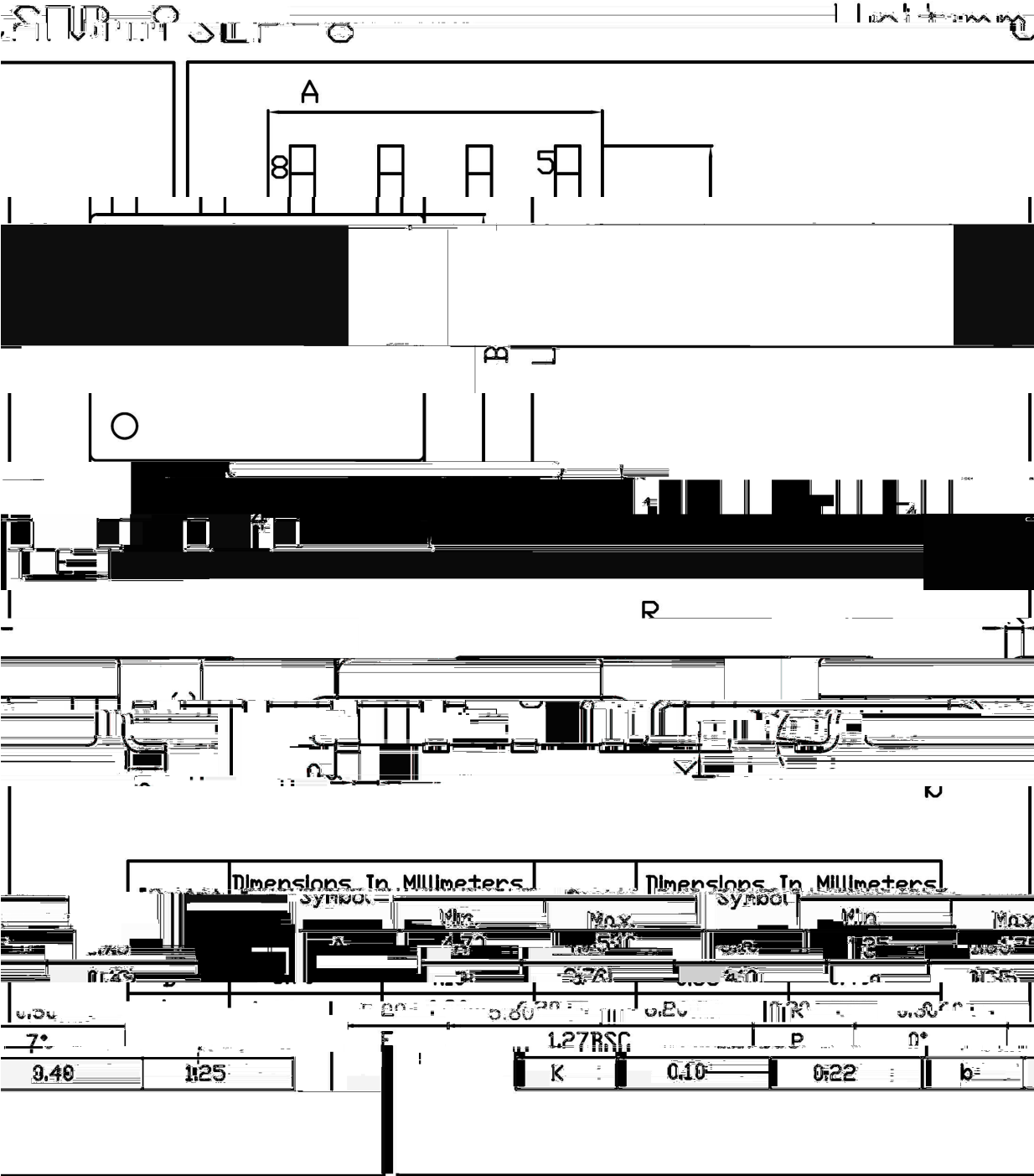
Electrical Characteristic Curve



/ Electrical Characteristic Curve

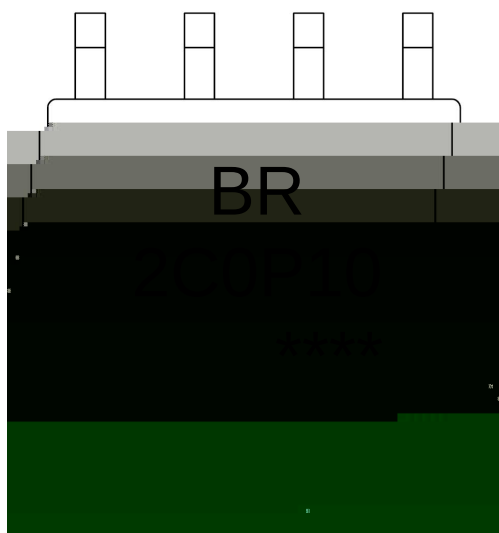


/ Package Dimensions





/ Marking Instructions



BR

2C0P10

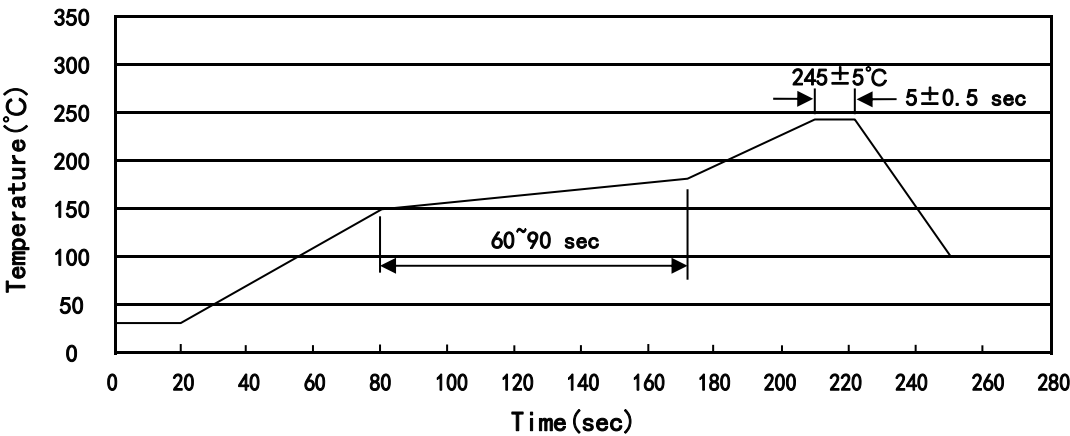
Note:

BR: Company Code

2C0P10: Product Type Code

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

() / 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)		
SOP/ESOP-8	4,000	2	8,000	6	48,000	13 ×12	360×360×50	380×335×366

/ Notices

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