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N- CHANNEL MOSFET in a SOT-23 Plastic Package.

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Super high dense cell design for low R_{DS(ON)},SOT-23 package, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

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Table 1 / Absolute Maximum Ratings(Ta=25 ;)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DSS}	20	V
Gate-Source Voltage	V _{GSS}	±12	V
Drain Current – Continuous	I _D	6.5	A
Pulsed Drain Current	I _{DM}	38	A
Power Dissipation	P _D	1.3	W
Storage Temperature Range	T _{stg}	-55 150	
Maximum Junction-to-Ambient	R _{JA}	90	/W
Maximum Junction-to-Ambient		Steady-State	
Maximum Junction-to-Lead	R _{JL}	80	

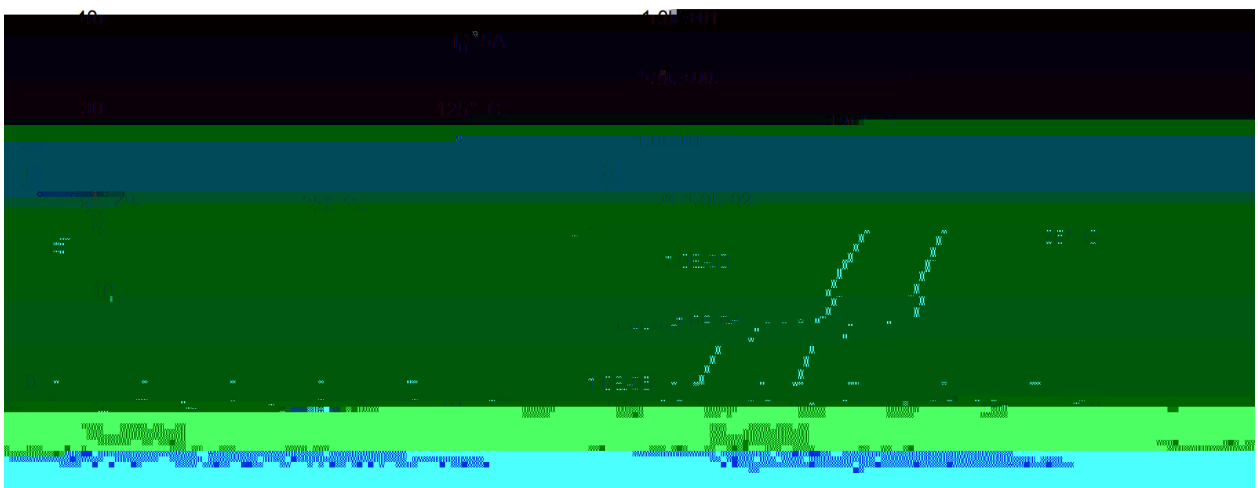
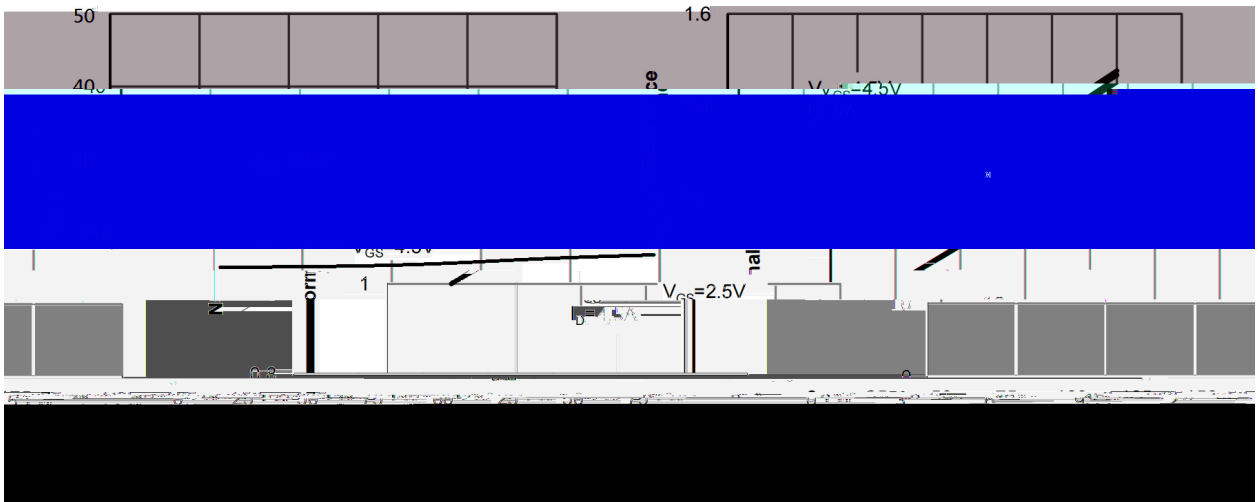
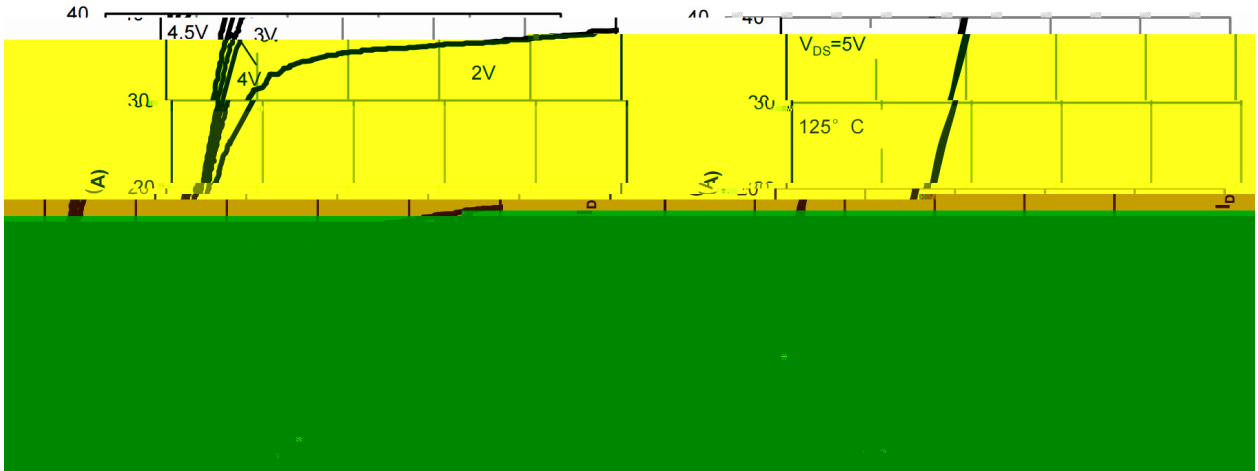
Table 2 / Electrical Characteristics(Ta=25 ;)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =250 A	0.5	0.9	1.2	V
Drain–Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0 I _D =250 A	20	21		V
Zero Gate Voltage Drain Current	I _{DSS}	V _{GS} =0 V _{DS} =20V			1.0	A
Gate–Body Leakage.	I _{GSS}	V _{GS} =±12V V _{DS} =0V			±100	nA
Static Drain–Source On–Resistance	R _{DS(on)1}	V _{GS} =4.5V I _D =5.0A		16.5	33	m
	R _{DS(on)2}	V _{GS} =2.5V I _D =4.5A		23.5	40	m
	R _{DS(on)3}	V _{GS} =1.8V I _D =4.0A			51	m
Drain–Source Diode Forward Voltage	V _{SD}	V _{GS} =0V I _D =1A		0.78	1.2	V

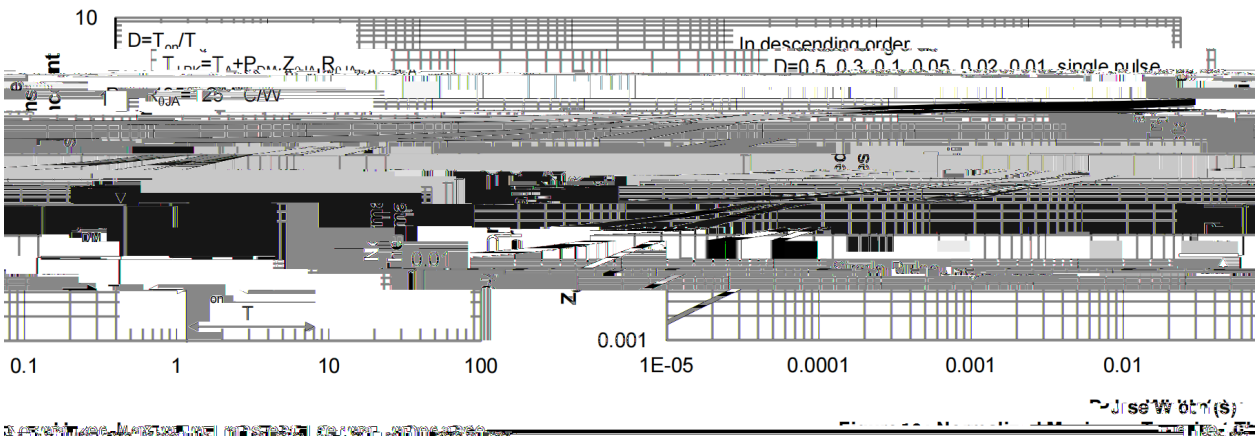
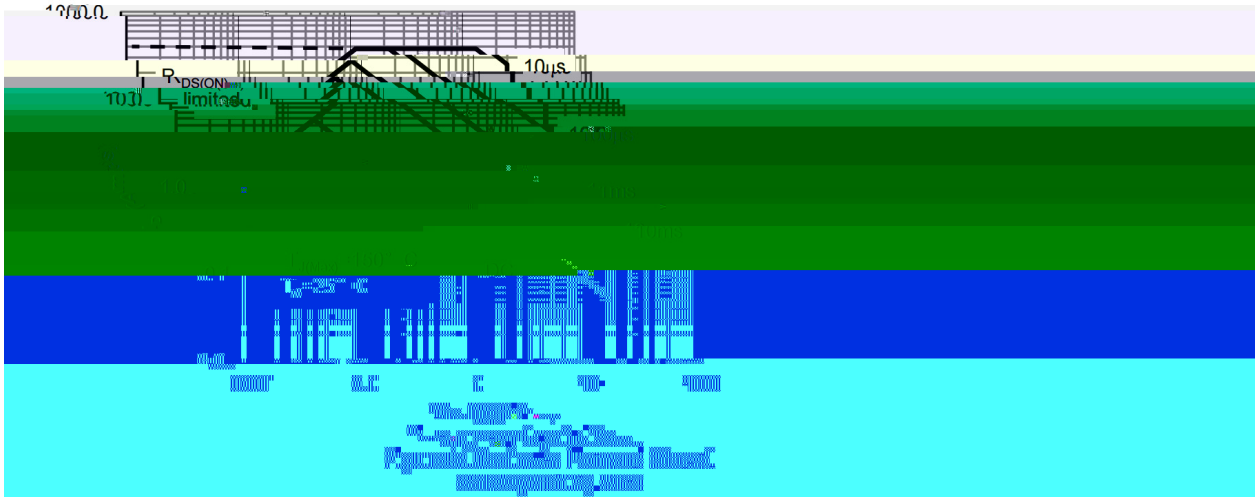
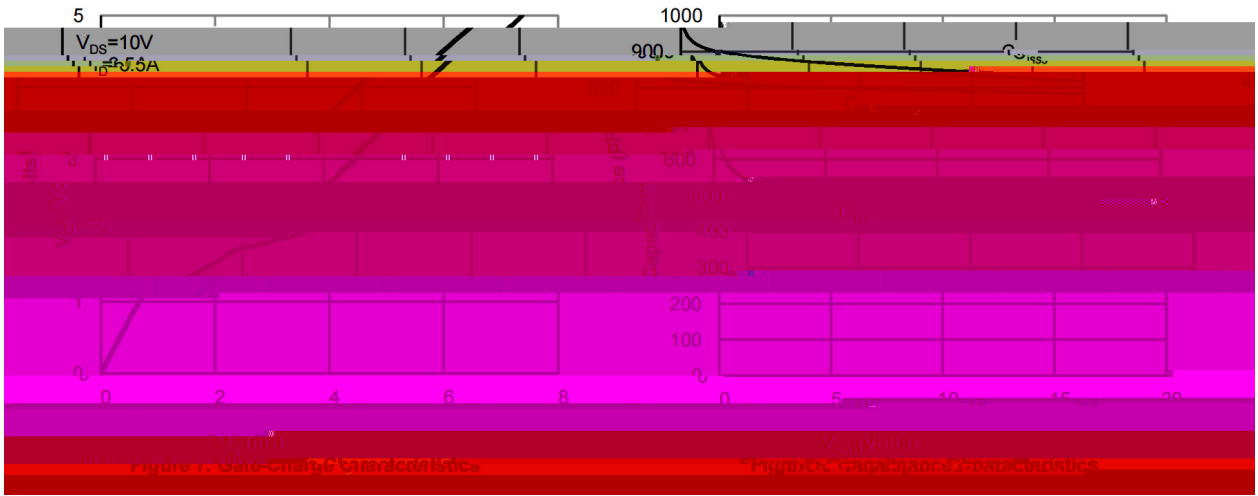
Electrical Characteristics(Ta=25 ;)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	Ciss	V _{GS} =0V, V _{DS} =10V f=1MHz		860		pF
Output Capacitance	Coss			800		
Reverse Transfer Capacitance	Crss			495		
Gate resistance	Rg	V _{GS} =0V, V _{DS} =0V f=1MHz		4.9		i
Total Gate Charge	Qg(4.5V)	V _{GS} =4.5V, V _{DS} =10V I _D =6.5A		7		nC
Gate Source Charge	Qgs			1		
Gate Drain Charge	Qgd			2		
Turn-On Delay Time	t _{d(on)}	V _{GS} =4.5V, V _{DS} =10V R _L =1.54 Ω, R _{GEN} =3 Ω		7		ns
Turn-On Rise Time	t _r			10		
Turn-Off Delay Time	t _{d(off)}			32		
Turn-Off Fall Time	t _f			11		

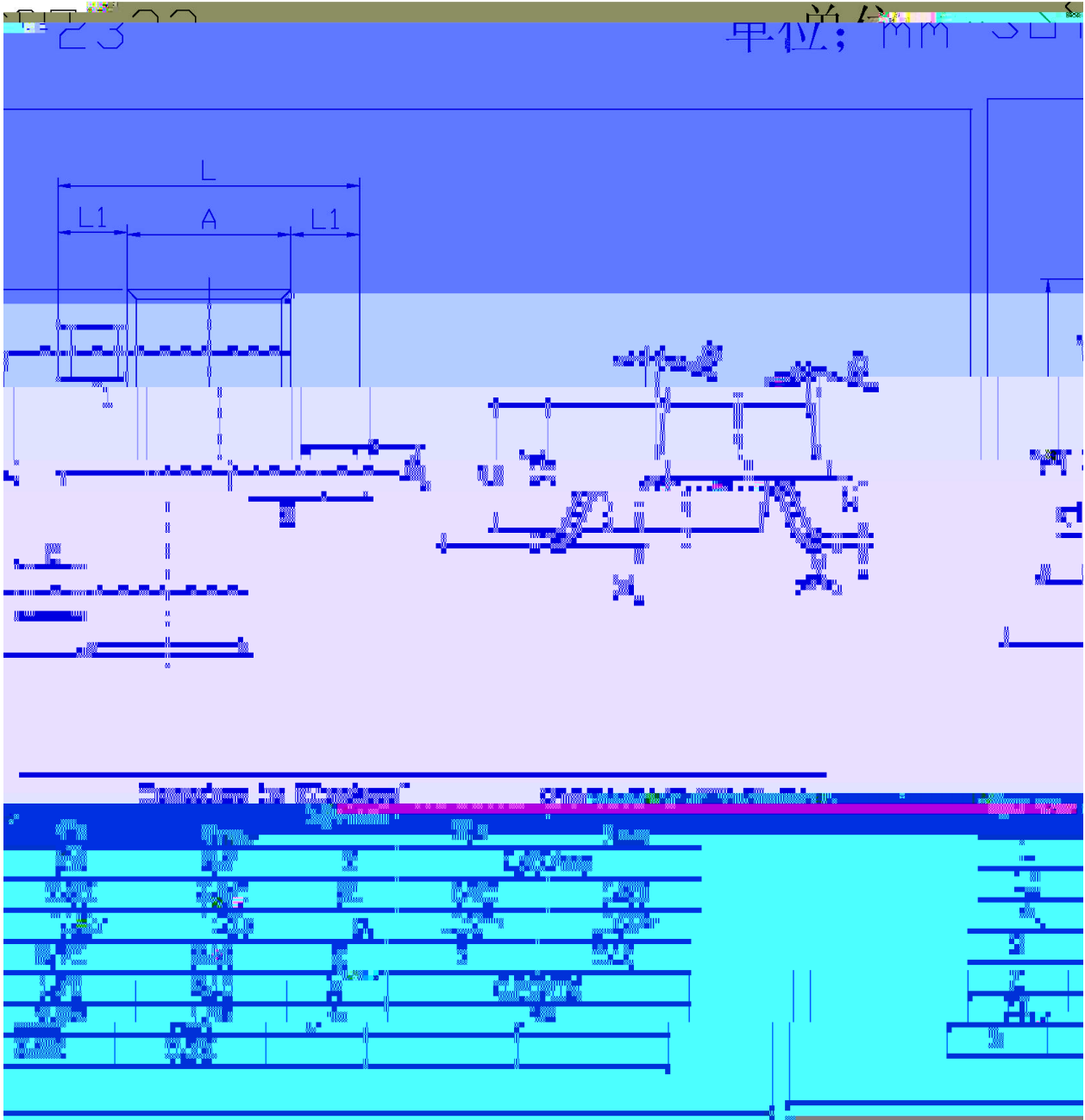
Ó ? d • Ž ϕ / Electrical Characteristic Curve



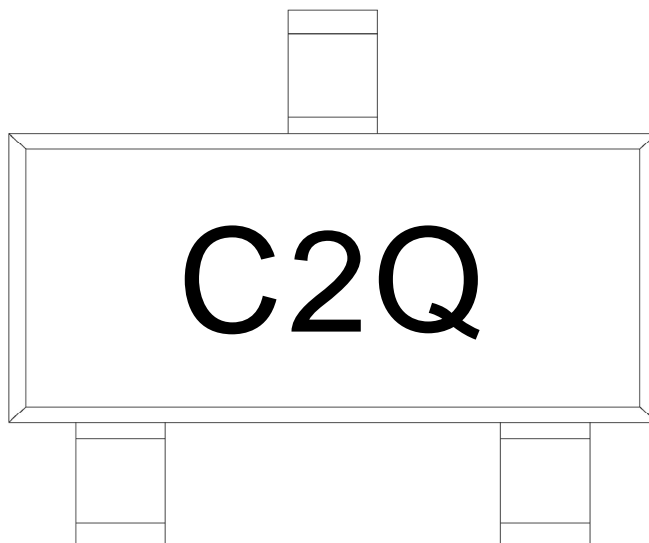
Electrical Characteristic Curve



Ø □ =) φ / Package Dimensions



Marking Instructions



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Note:

C2 y Product Type Code

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BRCS2312MAQ

Rev.A Nov.-2022



DATA SHEET

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Note:

- 1o• Ä ½ “ † 150 ½200 - k ž • 60 ½120sec; 1.Preheating:150~200 - , Time:60~120sec.
- 2o• Q › “ † 255 r5 - k ž • 4 Ò 5 r0.5sec; 2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.
- 3o•D N ò i Ö 0 , † 2 ½10 - /sec. 3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ~ »] / Resistance to Soldering Heat Test Conditions

“ † y 260 r5 - ž • y 10 r1 sec. Temp.:260 r5 - Time:10 r1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ~ E	Units ;>û !H	Dimension ;>û p . (unit Åmm ³)
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