

BRCS1C0P06MCQ

Rev.B Aug.-2025

/ Descriptions

SOT23-3 P

- CHANNEL MOSFET in a SOT23 -3 Plastic Package.

/ Features

$V_{DS}=-60V$; $I_D=-3A$

$R_{DS(on)1}@-10V$ 100m (Type.83m)

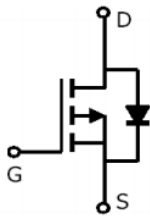
$R_{DS(on)2}@-4.5V$ 130m (Type.100m)

Qualified to AEC-Q101 Standards for High Reliability, HF Product.

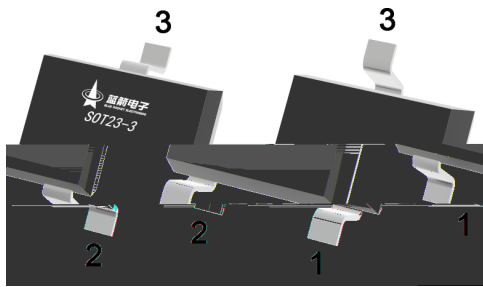
/ Applications

PWM application & Load switch, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 G

PIN 2 S

PIN 3 D

/ Marking

See Marking Instructions.

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Parameter	Symbol	Rating	Unit
Drain–Source Voltage	V_{DS}	-60	V
Gate–Body Leakage Voltage	V_{GSS}	± 20	V
Drain Current – Continuous	I_D	-3	A
Pulsed Drain Current	I_{DM}	-16	A
Power Dissipation	P_D	1.4	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 150	
Maximum Junction-to-Ambient	R_{JA}	89	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V$ $I_D=-250\mu A$	-60	-65		V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-1	-1.6	-2.5	V
Static Drain–Source On–Resistance	$R_{DS(on)}$	$V_{GS}=-10V$ $I_D=-2A$		83	100	m Ω
		$V_{GS}=-4.5V$ $I_D=-1A$		100	130	m Ω
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-60V$ $V_{GS}=0V$			-1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{GS}=\pm$				

/ Electrical Characteristic Curve

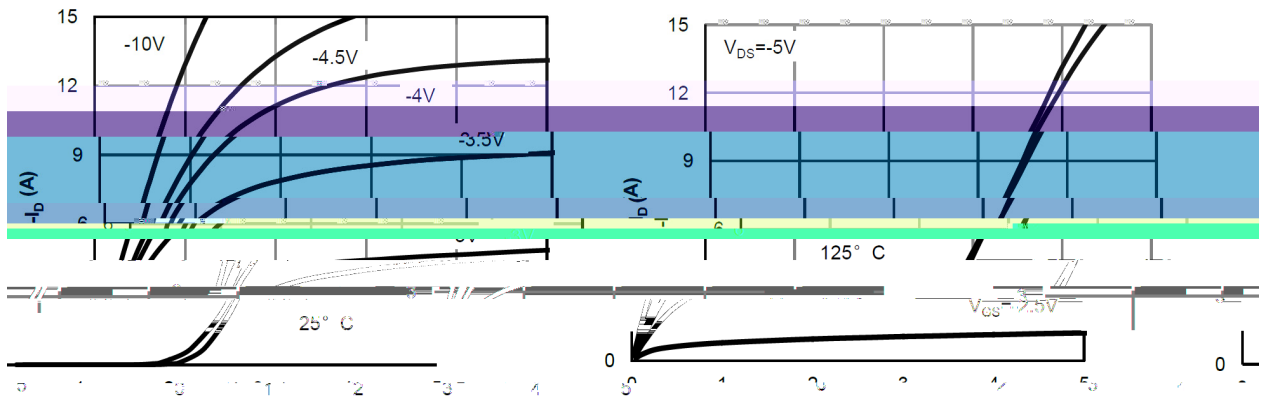


Figure 1: On-Resistance vs. Drain Current

Figure 2: Transfer Characteristics

Figure 1: On-Resistance vs. Drain Current

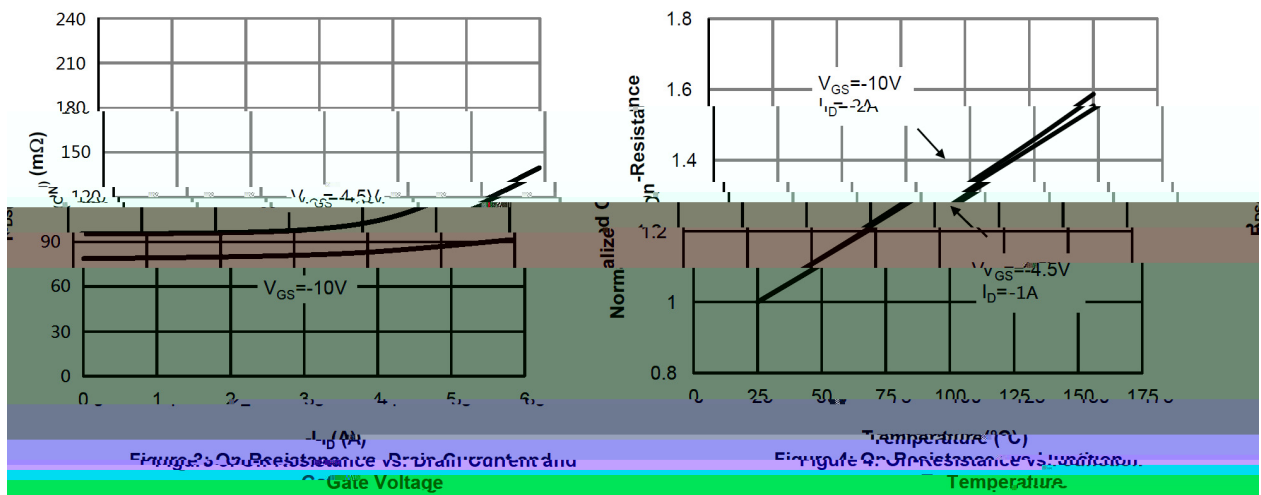


Figure 3: On-Resistance vs. Drain Current

Figure 4: On-Resistance vs. Temperature

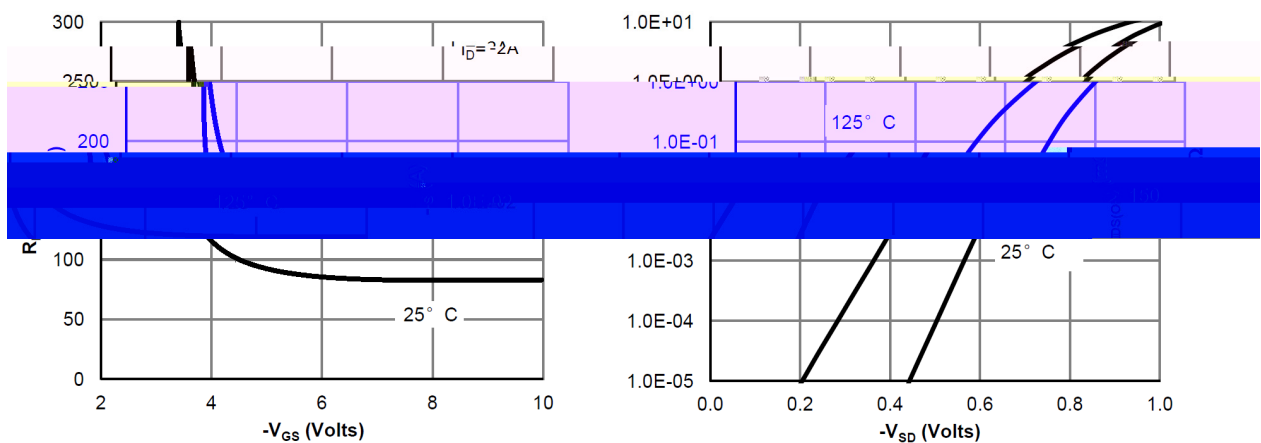


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

/ Electrical Characteristic Curve

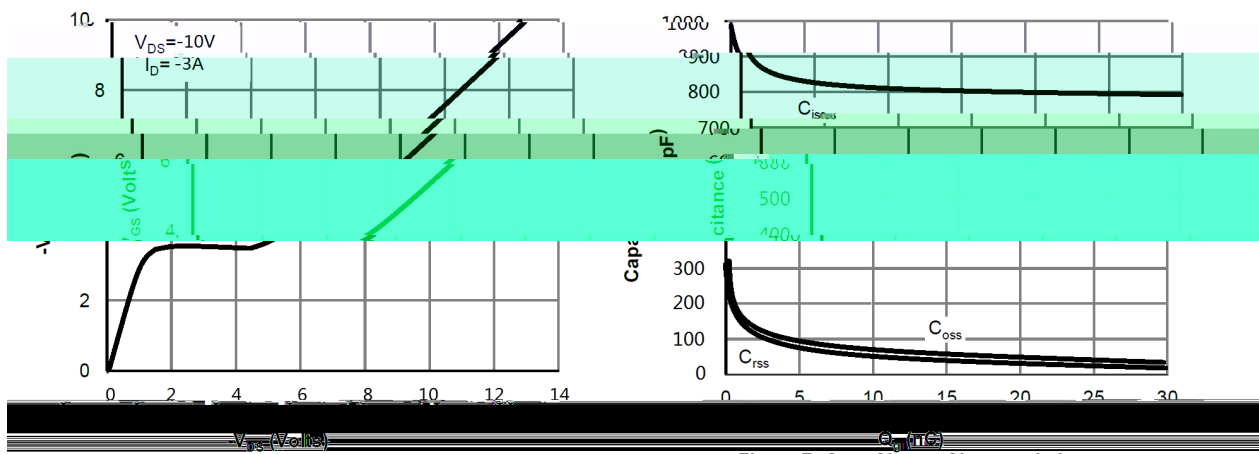
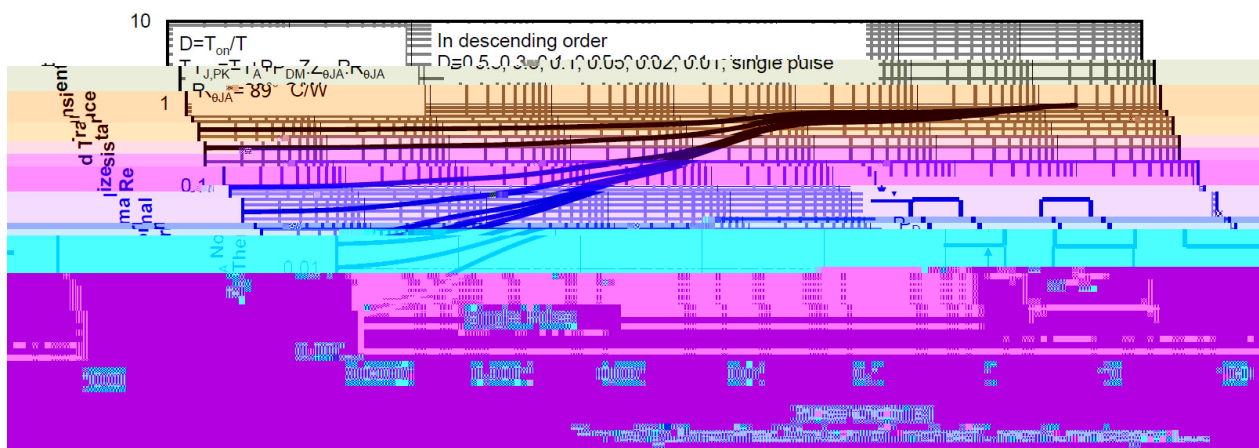
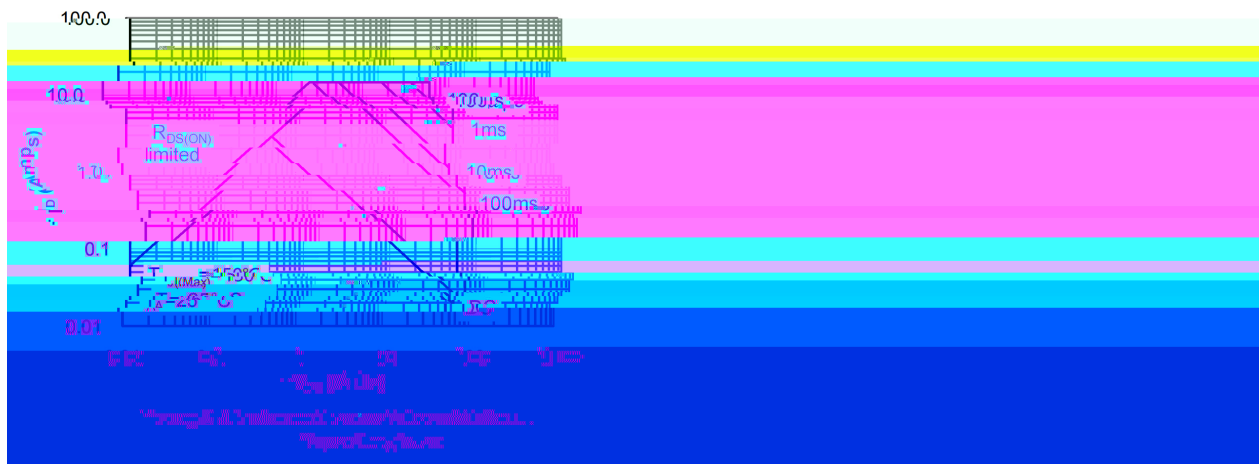
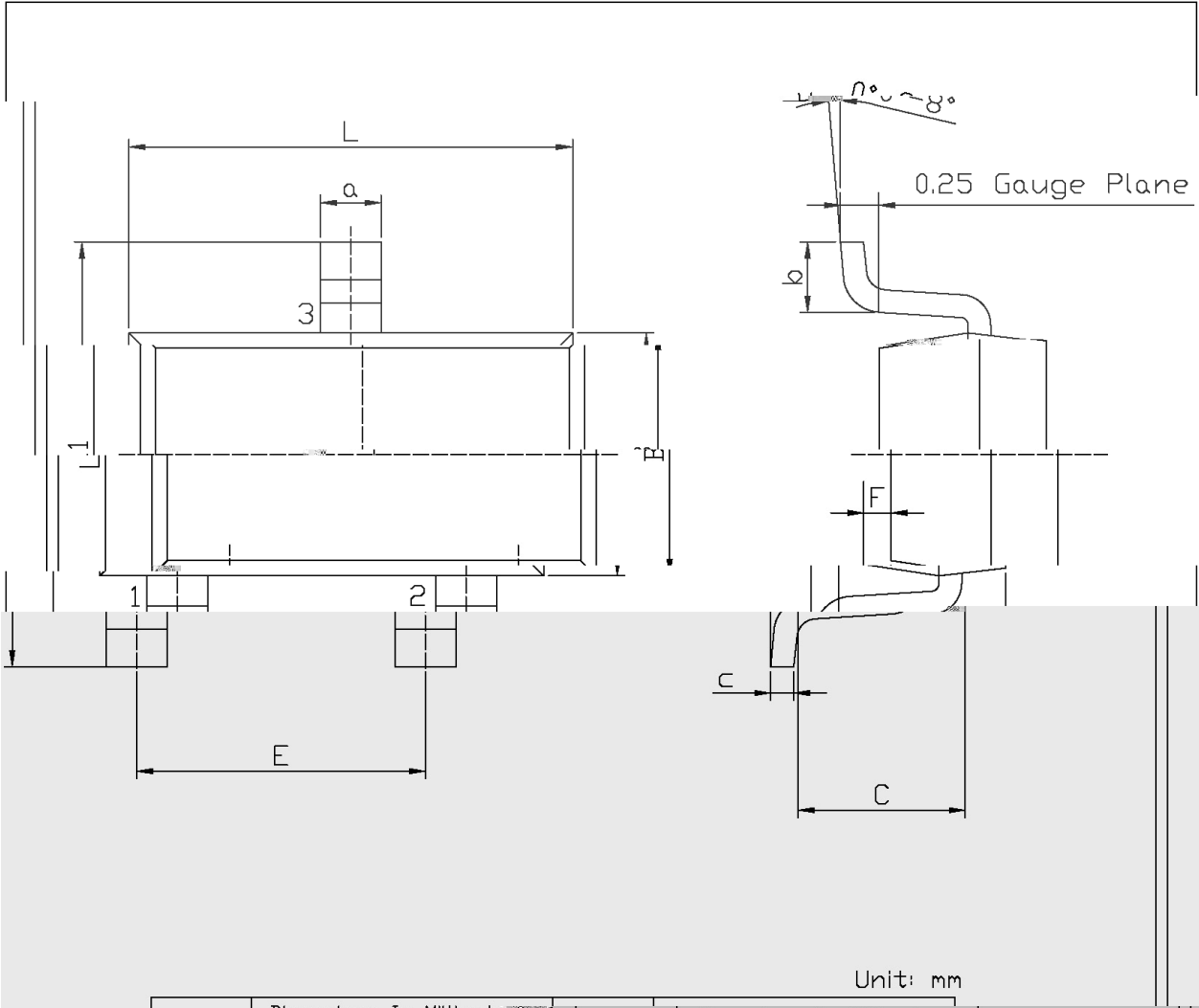


Figure 8: Capacitance Characteristics

Figure 7: Gate-Charge Characteristics

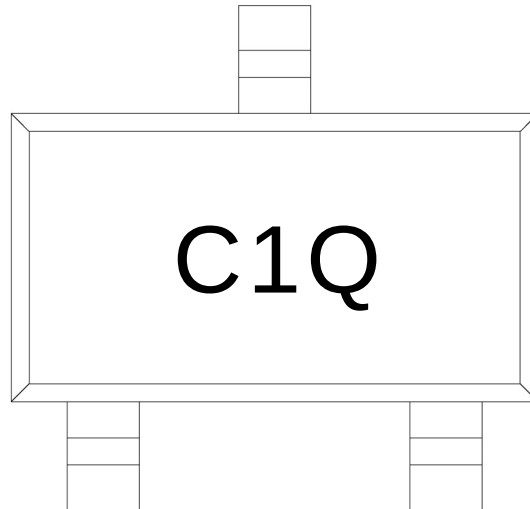


/ Package Dimensions



Dimensional Millimeters		Dimension in Mil	
	2.83	2.02	0.25
			0.50

/ Marking Instructions



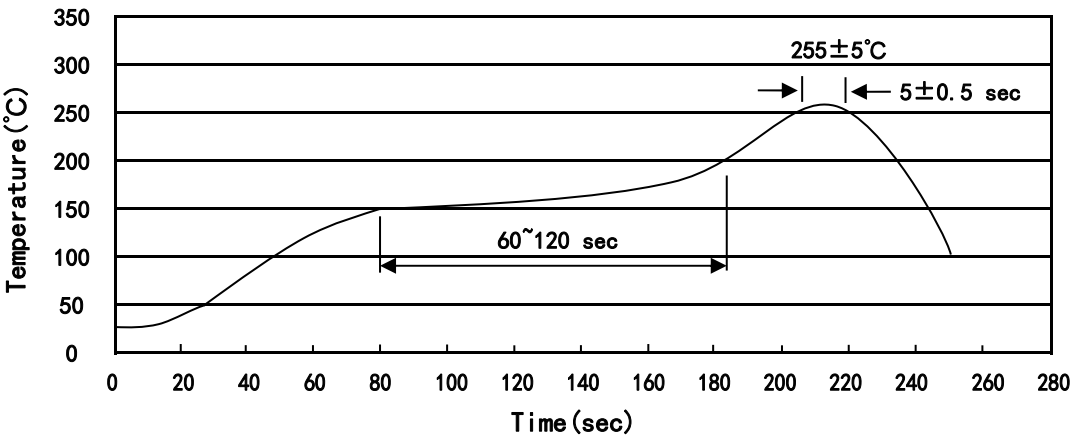
C1

Note:

Q: Automobile halogen-free product Code

C1: Product Type Code

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Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 2

255 5

5 0.5sec;

2.Peak Temp.:255 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 ×8	210×205×205	445×435×230

/ Notices