

BRCS1C0P06MCQ

Rev.B Aug.-2025

/ Descriptions

SOT23-3 P

P- CHANNEL MOSFET in a SOT23 -3 Plastic Package.

/ Features

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

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

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

AEC-Q101

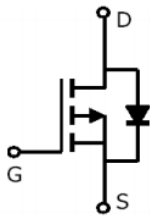
Qualified to AEC-Q101 Standards for High Reliability, HF Product.

/ Applications

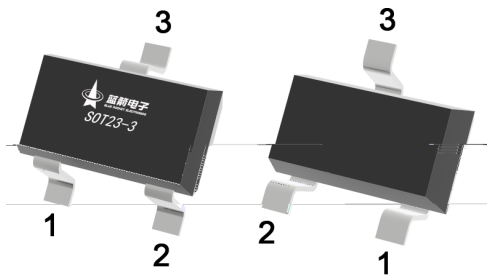
PWM

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.

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	$R_{\theta JA}$	89	/W

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

/ Electrical Characteristic Curve

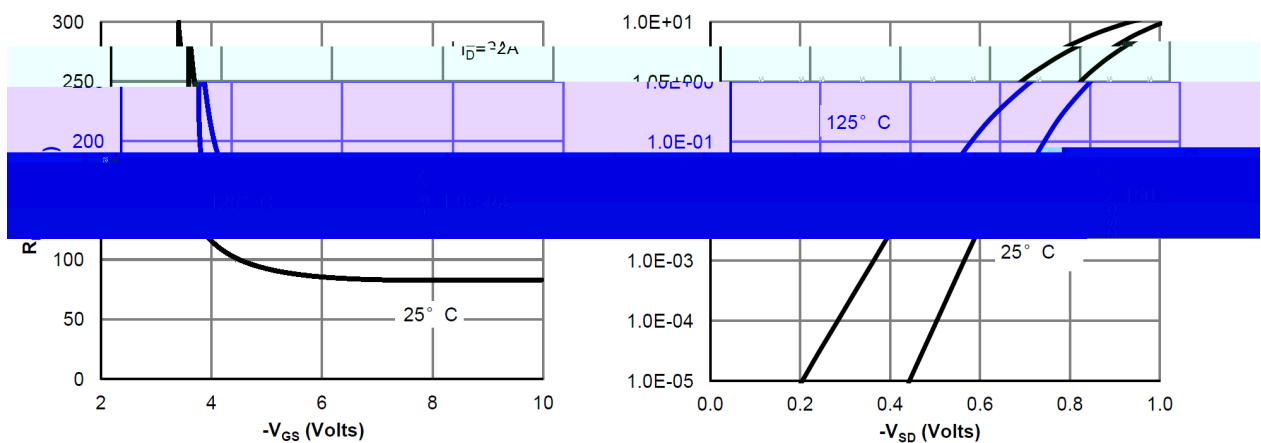
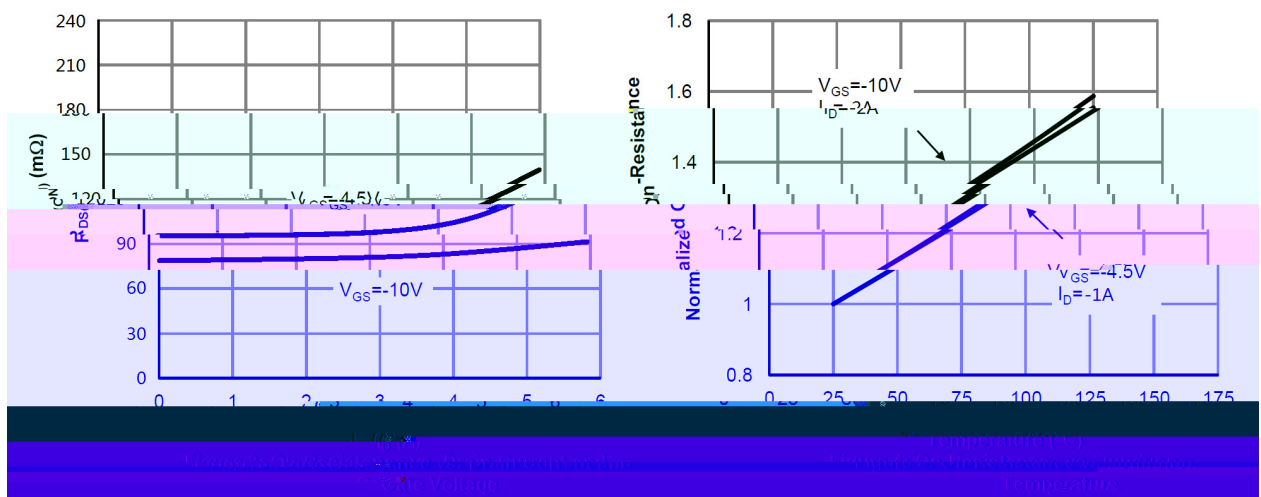
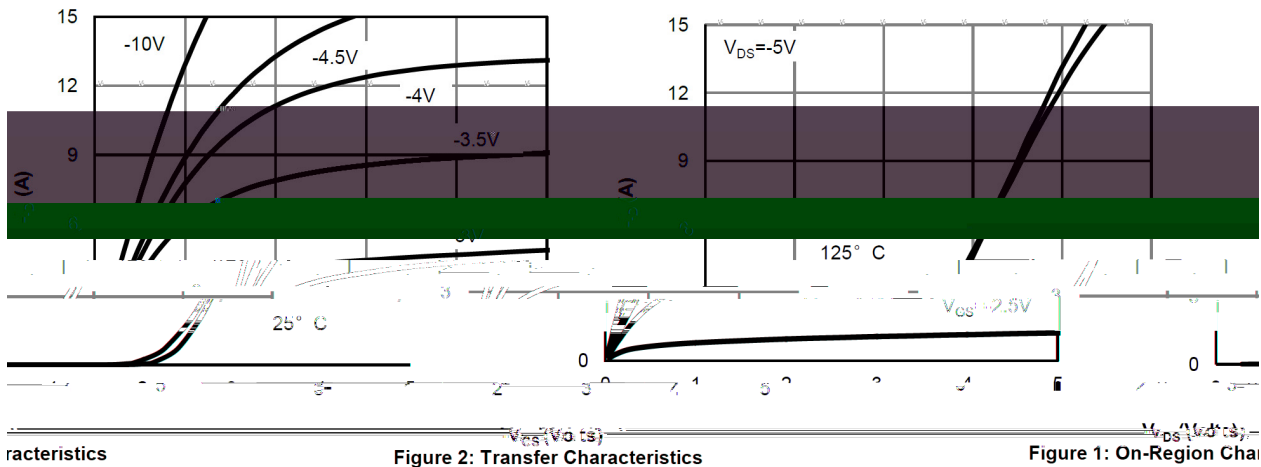


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

/ Electrical Characteristic Curve

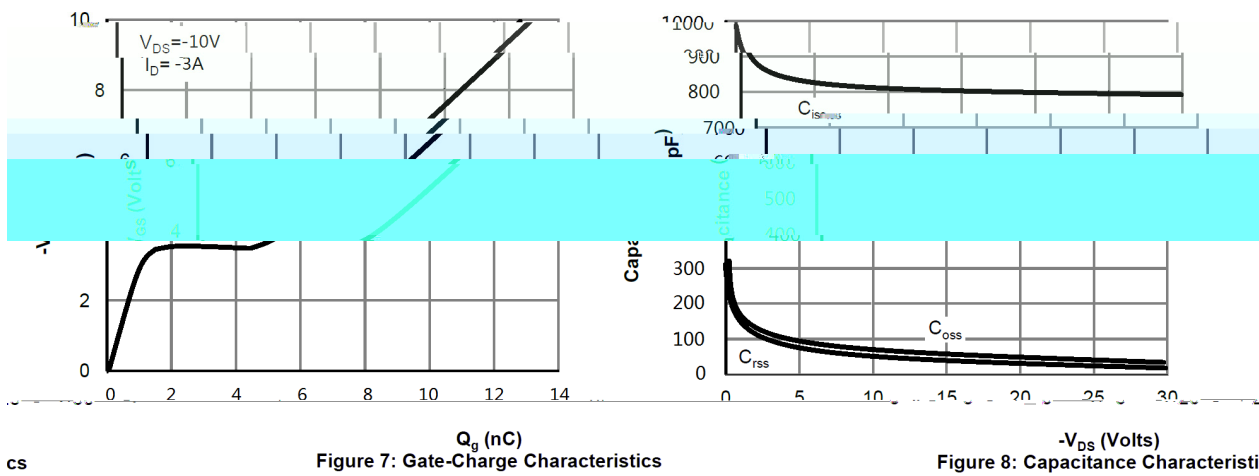
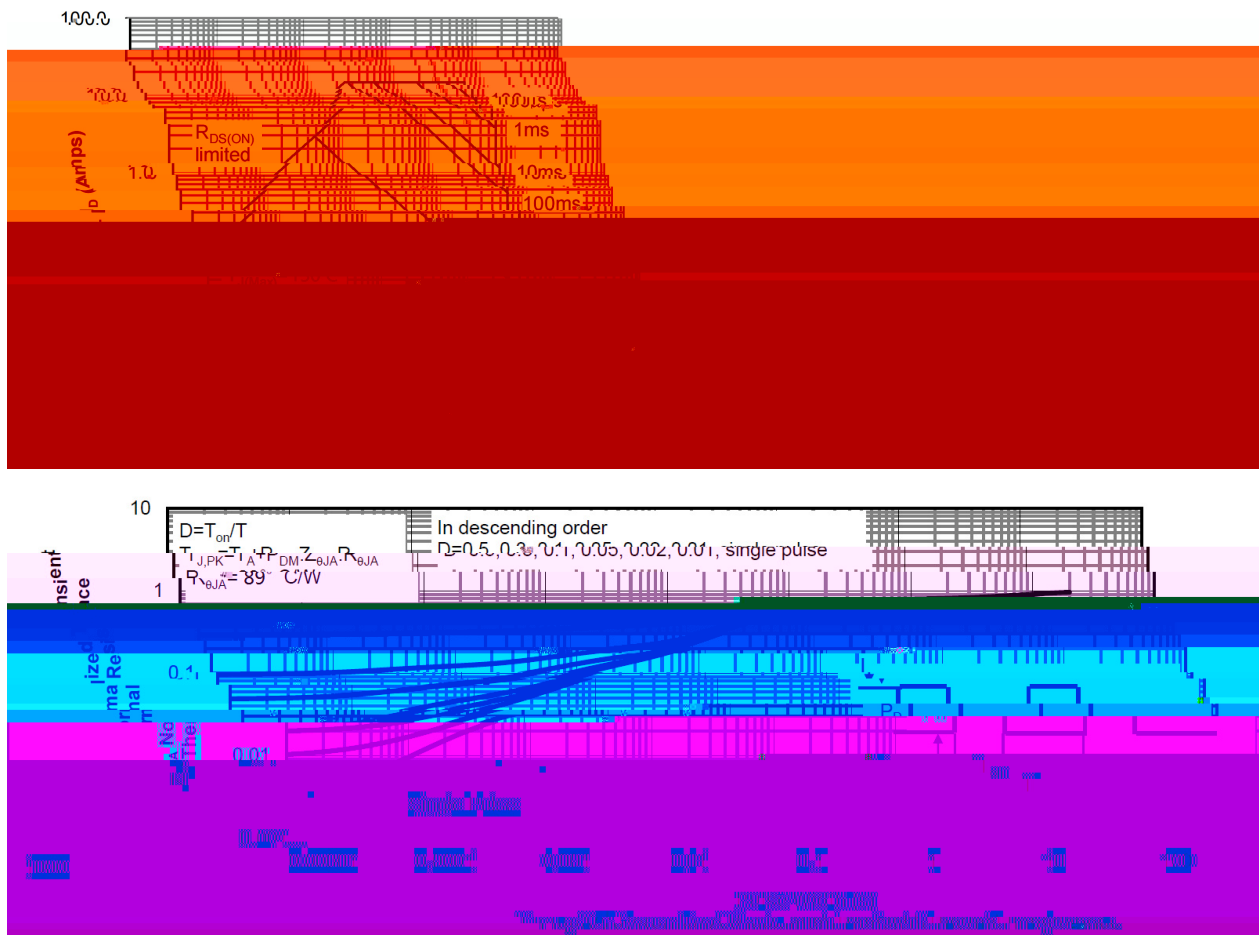
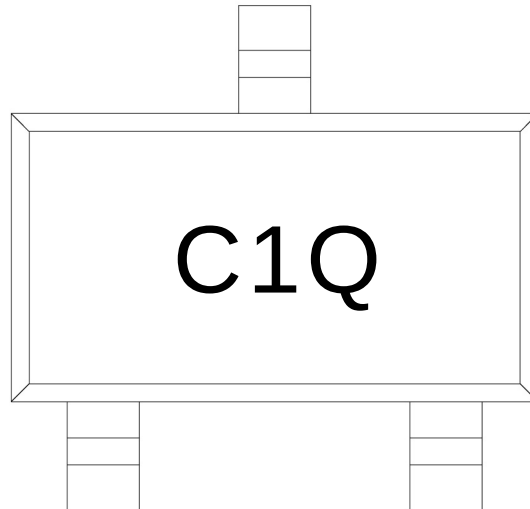


Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characteristics



/ Marking Instructions



Q

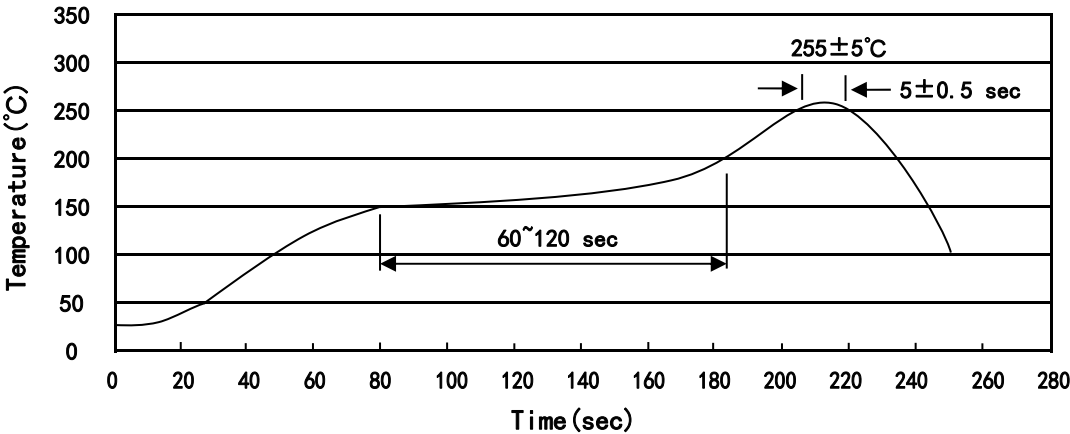
C1

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 °C, Time:60~120sec. |
| 2 | 255±5 | | | 5±0.5sec; | 2.Peak Temp.:255±5 °C, Duration:5±0.5sec. |
| 3 | | 2 | 10 | /sec. | 3.Cooling Speed: 2~10 °C/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