

BRCS3400MCQ

Rev. A Jun.-2022

SOT23-3

N MOS

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

$$V_{DS} (V) = 30V$$

$$I_D = 5.8 A (V_{GS} = 10V)$$

$$R_{DS(ON)} < 32m (V_{GS} = 10V)$$

$$R_{DS(ON)} < 36m (V_{GS} = 4.5V)$$

$$R_{DS(ON)} < 56m (V_{GS} = 2.5V)$$

AEC-Q101
HF Product.

Qualified to AEC-Q101 Standards for High Reliability,

This device is suitable for use as a load switch or in PWM applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



PIN1 G

PIN 2 S

PIN 3 D

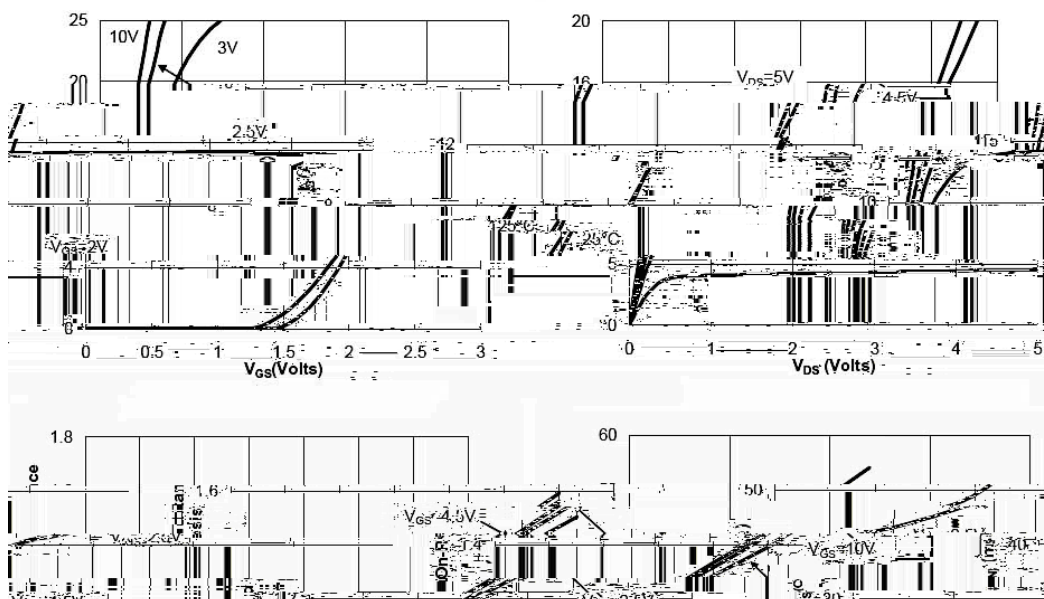
/ Marking

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Drain Current – Continuous	I_D	5.8	A
Drain Current- Continuous	$I_D(T_a=70^\circ\text{C})$	4.9	A
Pulsed Drain Current	I_{DM}	30	A
Gate-Source Voltage	V_{GS}	± 12	V
Total Power Dissipation	P_D	1.4	W
Total Power Dissipation	$P_D(T_a=70^\circ\text{C})$	1.0	W
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to 150	

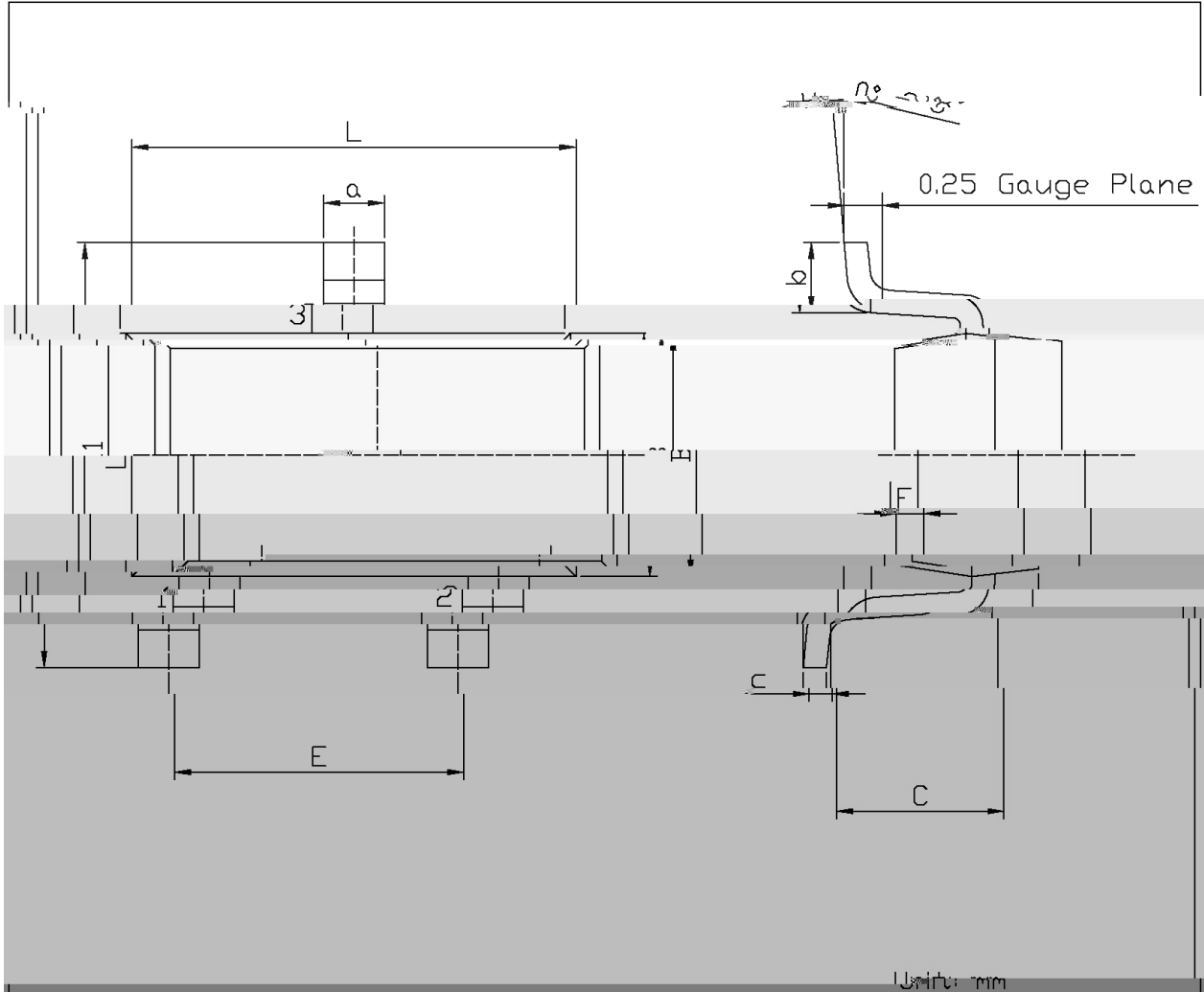
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=24V$ $V_{GS}=0V$			1	μA
		$V_{DS}=24V$ $V_{GS}=0V$ $T_J=55$			5	μA
Gate–Body Leakage.	I_{GSS}	$V_{GS}=\pm 12V$ $V_{DS}=0V$			± 0.1	μA
On–State Drain Current	$I_{D(on)}$	$V_{GS}=4.5V$ $V_{DS}=5V$	30			A
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	0.65	1.1	1.45	V
Static Drain–Source On–Resistance	$R_{DS(on)(1)}$	$V_{GS}=10V$ $I_D=5.8A$		29	32	m
	$R_{DS(on)(2)}$	$V_{GS}=10V$ $I_D=5.8A$ $T_J=125$			39	
	$R_{DS(on)(3)}$	$V_{GS}=4.5V$ $I_D=5A$		32	36	
	$R_{DS(on)(4)}$	$V_{GS}=2.5V$ $I_D=4A$		40	56	
Forward Transconductance	g_{FS}	$V_{DS}=5V$ $I_D=5A$	10	15		S
Drain–Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$		0.77	1	V
Input Capacitance	C_{iss}	$V_{DS}=15V$ $V_{GS}=0V$ $f=1MHz$		823	1030	pF
Output Capacitance	C_{oss}			99		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	$V_{DS}=15V$ $V_{GS}=0V$ $f=1MHz$		823	1030	pF
Output Capacitance	C_{oss}			99		
Reverse Transfer Capacitance	C_{rss}			77		
Gate resistance	R_g	V				

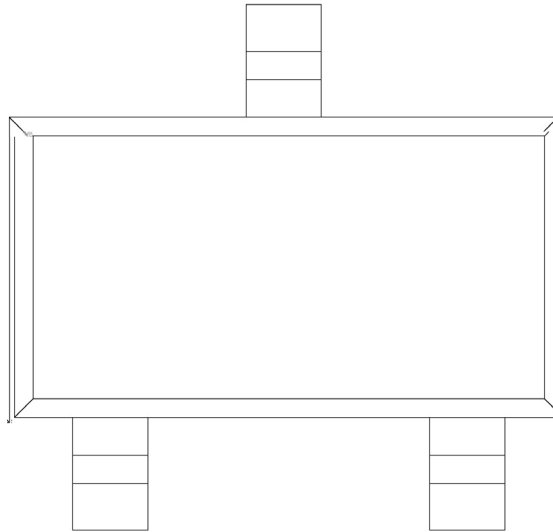
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



Q

A0

H

Note:

Q: Automobile halogen-free product Code

