

# BRC5700P10DPQ

Rev.A Dec.-2023

## / Descriptions

TO-252 P MOS  
P-CHANNEL MOSFET in a TO-252 Plastic Package.

## / Features

$V_{DS}(V)=-100V$   $I_D=-22A$   
 $R_{DS(ON)}@-10V<70m$  (Typ.67mR)  
 $R_{DS(ON)}@-4.5V<85m$  (Typ.70mR)

AEC-Q101  
HF Product.

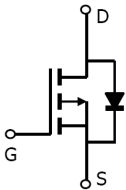
Qualified to AEC-Q101 Standards for High Reliability,

## / Applications

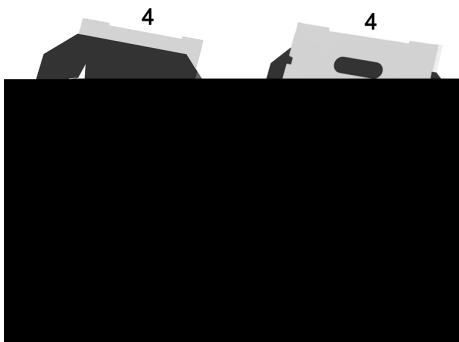
DC/DC

Power Management of Industrial DC/DC Converter, Meet the stringent requirements of automotive applications.

## / Equivalent Circuit



## / Pinning



PIN1 G      PIN 2 D      PIN 3 S      PIN 4 D

## / Marking

See Marking Instructions.

# BRC5700P10DPQ

Rev.A Dec.-2023



DATA SHEET

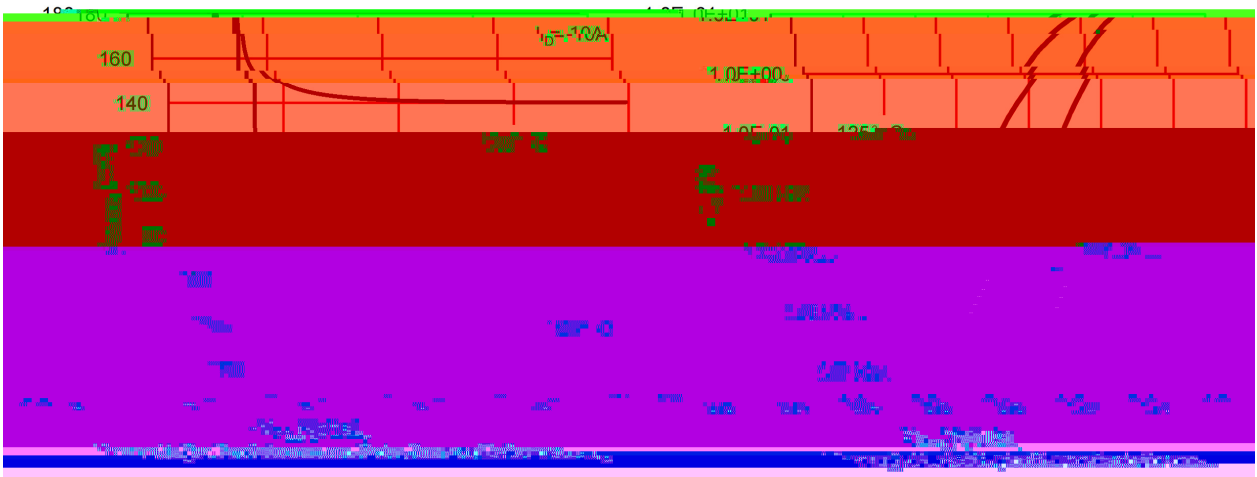
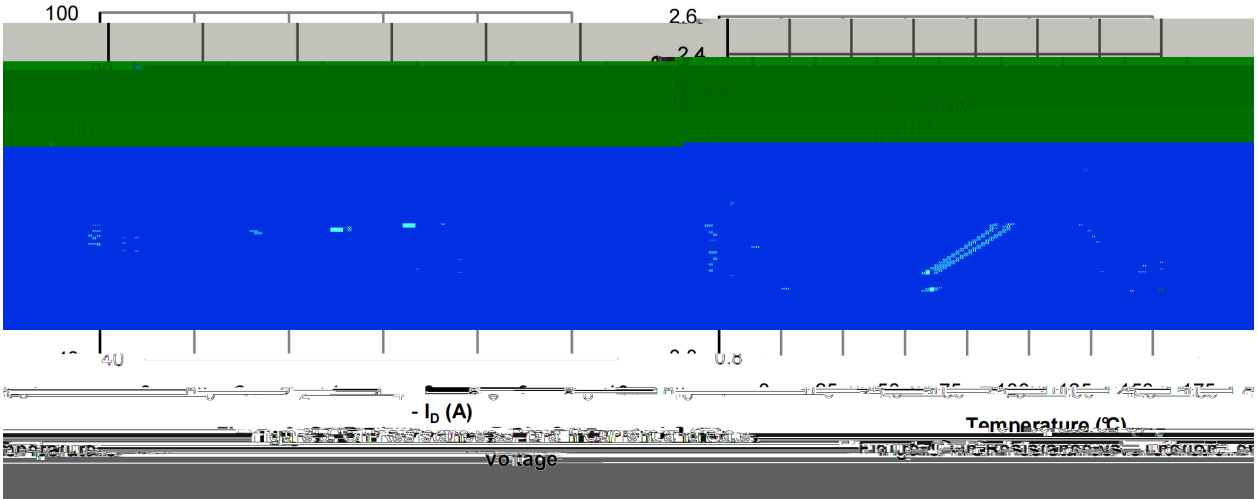
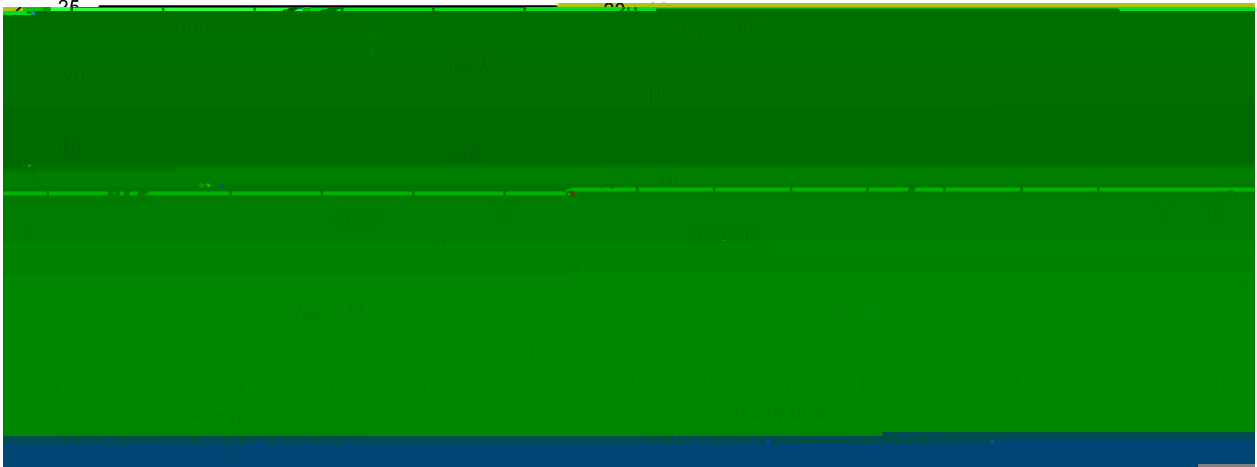
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		$V_{DS}$	-100	V
Drain Current - Continuous		$I_D(T_c=25^\circ\text{C})$	-22	A
Drain Current – Pulsed		$I_{DM}$	-66	A
Gate-Source Voltage		$V_{GS}$	$\pm 20$	V
Power Dissipation		$P_D(T_c=25^\circ\text{C})$	75	W
Single Pulse Avalanche Energy(L=0.5mH)		$E_{AS}$	176.4	mJ
Avalanche Current(L=0.5mH)		$I_{AS}$	-21	A
Junction and Storage Temperature Range		$T_j, T_{stg}$	-55 to 150	
Thermal resistance, junction - ambient	Steady-State	$R_{JA}$	62	/ W
Thermal resistance, junction - case	Steady-State	$R_{JC}$	1.67	

Parameter                      Symbol                      Test Conditions                      Min

**/ Electrical Characteristics(Ta=25 )**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V$ $V_{DS}=-50V$ $R_L=10$ $R_{GEN}=3$		6		ns
Turn-On Rise Time	$t_r$			2.4		
Turn-Off Delay Time	$t_{d(off)}$			19		
Turn-Off Fall Time	$t_f$			2.6		

/ Electrical Characteristic Curve



**BRCS700P10DPQ**

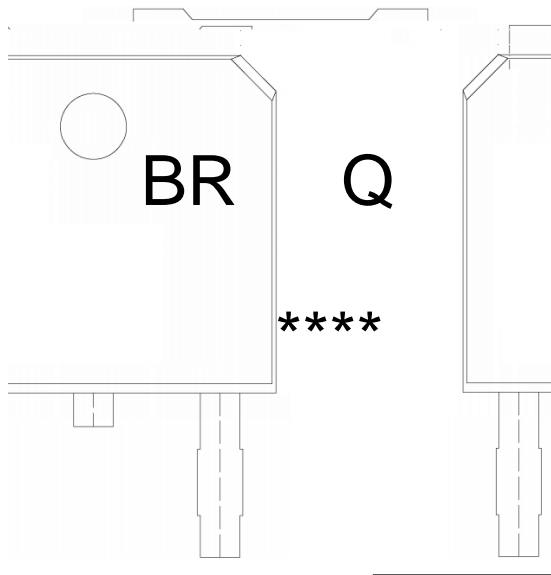
# BRC700P10DPQ

Rev.A Dec.-2023

DATA SHEET



## / Marking Instructions



BR

Q

700P10

\*\*\*\*

Note:

BR: Company Code

Q: Automobile halogen-free product Code

700P10: Product Type Code

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

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)


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.            |