



**/ Descriptions**

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

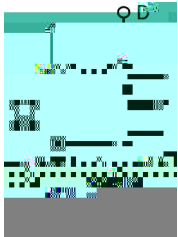
**/ Features**

Low  $R_{DS(on)}$ , low gate charge, low  $C_{rSS}$ , fast switching, Trench Technologies. HF Product.

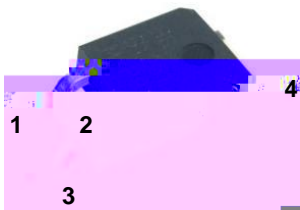
**/ Applications**

Suited for low voltage applications such as automotive, DC/DC Converters, and high efficiency switching for power management in portable and battery operated products.

**/ Equivalent Circuit**



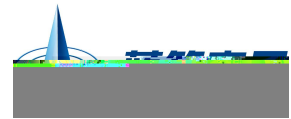
**/ Pinning**



PIN 1 G      PIN 2 D      PIN 3 S      PIN 4 D

**/ h<sub>FE</sub> Classifications & Marking**

? @ A B C fi See Marking Instructions.



Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DSS}$	40	V
Drain Current	$I_D(T_C=25^\circ C)$	-40	A
Drain Current - Pulsed	$I_{DM}$	-115	A
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Avalanche Current	$I_{AS}$	24.5	A
Single Pulsed Avalanche Energy (L=0.5mH)	$E_{AS}$	210	mJ
Power Dissipation	$P_D(T_C=25^\circ C)$	52	W
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	$t \leq 10s$	20
		Steady-State	50
Thermal Resistance-Junction to Case	$R_{\theta JC}$	2.4	$^\circ C/W$

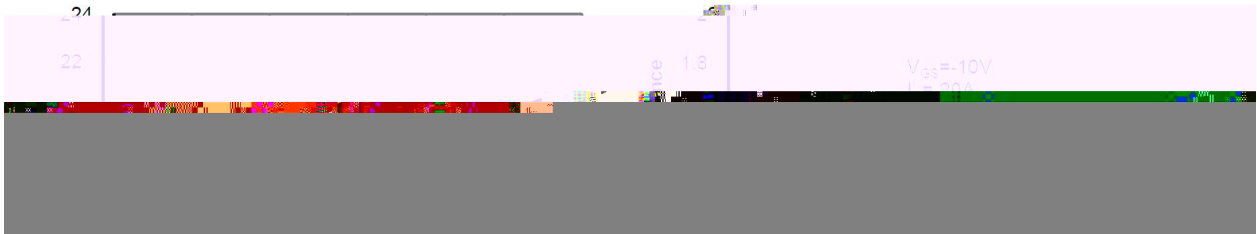
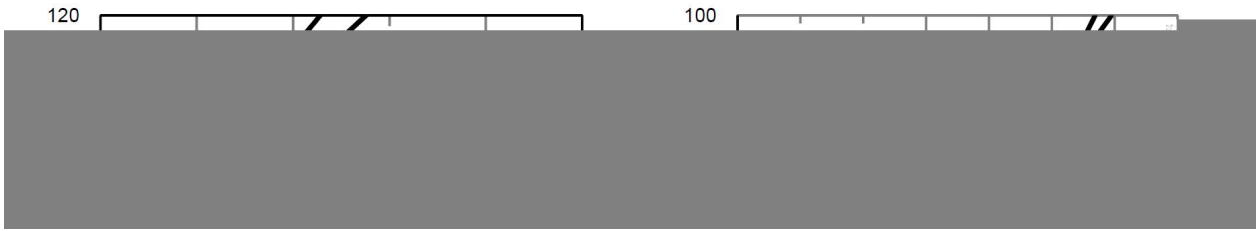
28970 0.04700



/ Electrical Characteristics(Ta=25 )

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V$ $V_{DS}=-20V$ $R_L=1 \Omega$ $R_{GEN}=3$		9.4		ns
Turn-On Rise Time	$t_r$			20		
Turn-Off Delay Time	$t_{d(off)}$			55		
Turn-Off Fall Time	$t_f$			30		

**/ Electrical Characteristic Curve**



# BRCS150P04DP

Rev.A Mar.-2022

DATA SHEET

http://

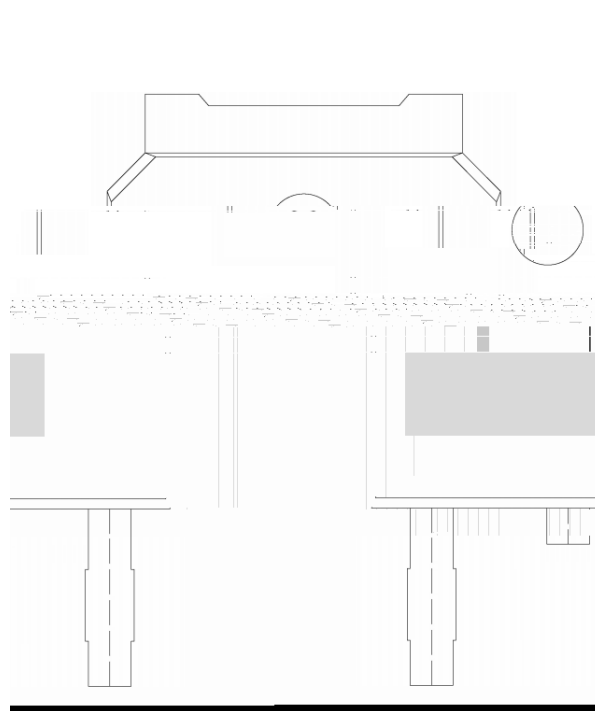
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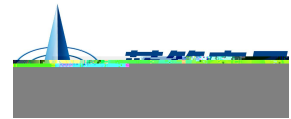
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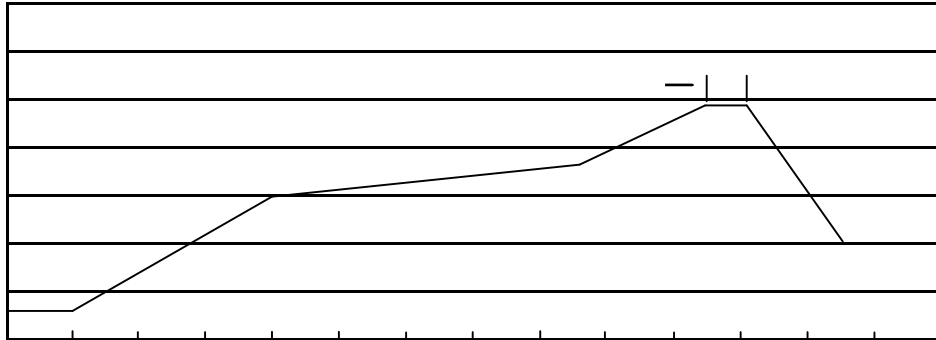
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**/ Marking Instructions**





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



Note:

- 1      150 180      60 90sec;      1.Preheating:150~180 , Time:60~90sec.
- 2      245 5      5 0.5sec;      2.Peak Temp.:245 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 封装形式	Units 包装数量				Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
					盒	箱	
					"		

/ TUBE

Package Type 封装形式	Units 包装数量				Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
					套管	盒	箱

**/ Notices**