

# BRCS070N06SHDP

Rev.A Jul.-2024

## / Descriptions

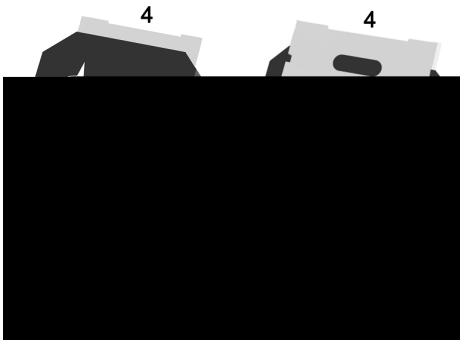
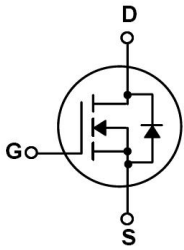
TO-252            N  
N-CHANNEL MOSFET in a TO-252 Plastic Package.

## / Features

$V_{DS}=60V$      $I_D=78A$   
 $R_{DS(on)}@10V$  7m (Type. 5.7m )  
 $R_{DS(on)}@6V$  12m (Type. 6.2m )  
HF Product.

## / Applications

; : & :  
DC/DC Converter, Ideal for high-frequency switching and synchronous rectification.



PIN1 G            PIN 2 D            PIN 3 S            PIN 4 D

## / Marking

See Marking Instructions.

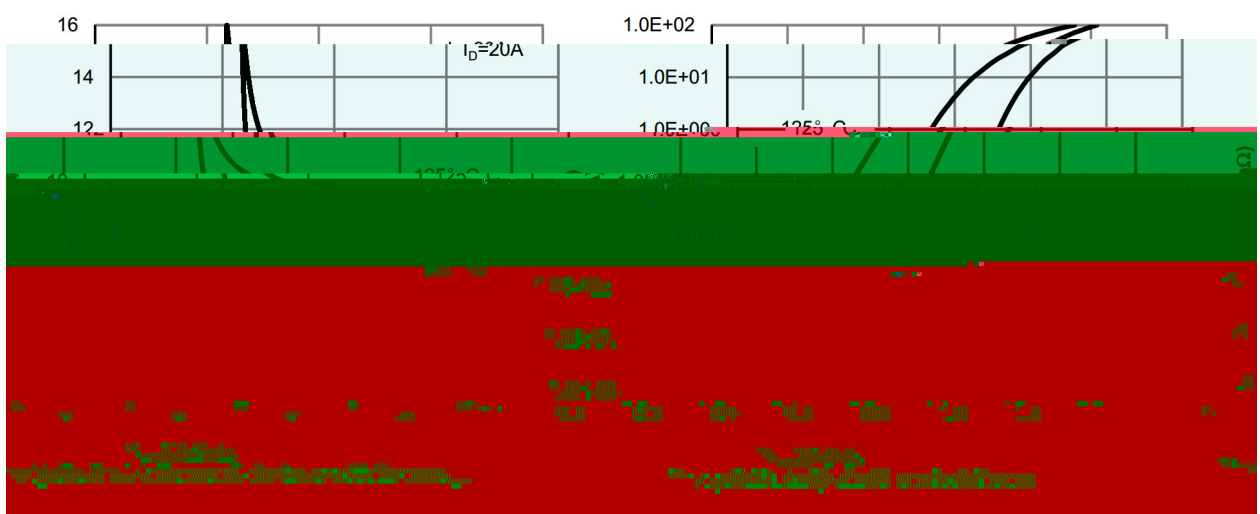
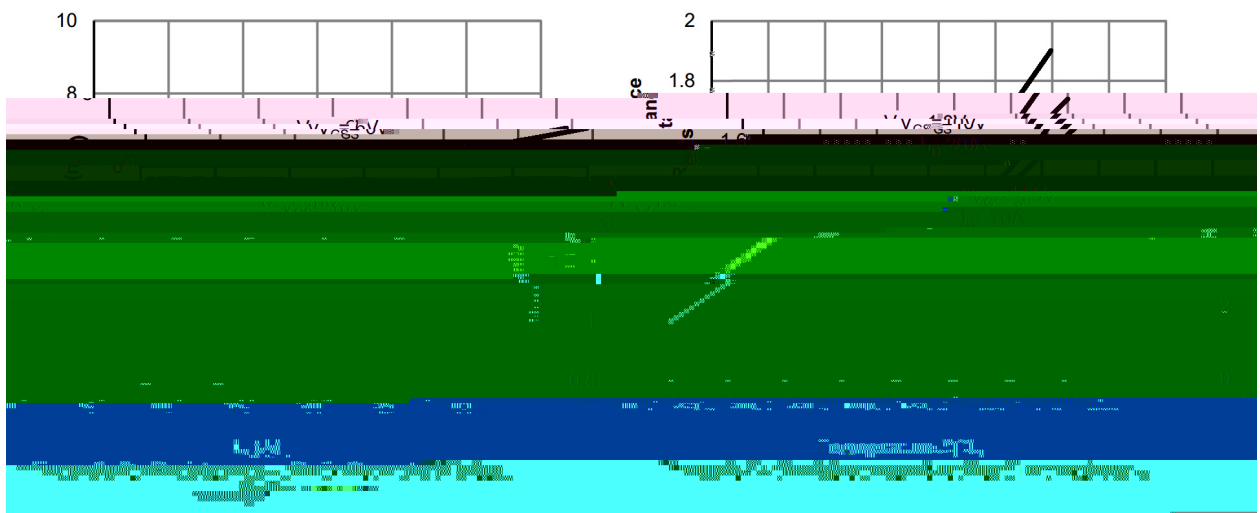
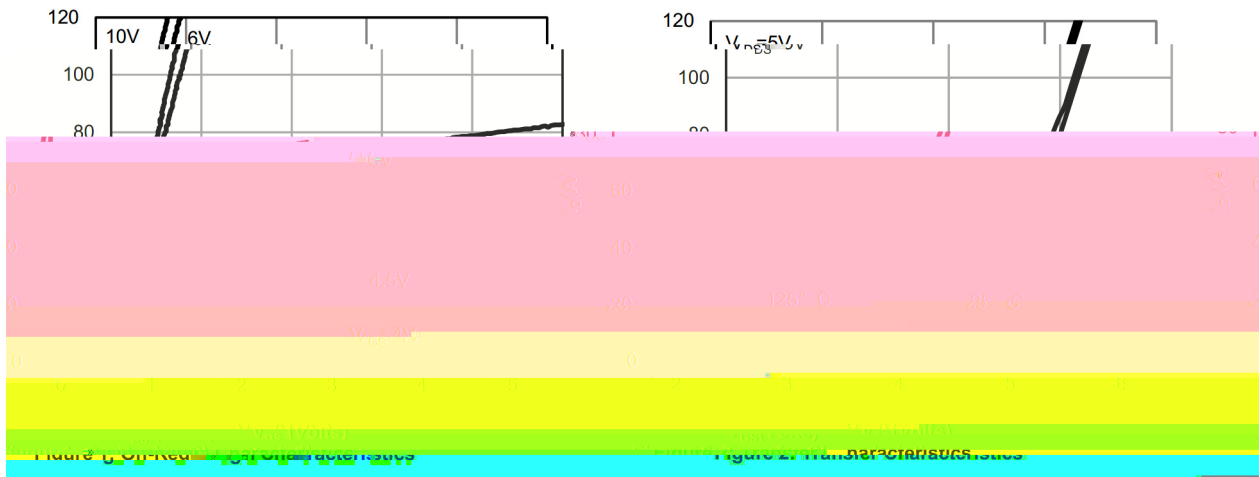
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		$V_{DSS}$	60	V
Drain Current		$I_D(T_C=25^\circ C)$	78	A
Pulsed Drain Current		$I_{DM}$	274	A
Gate-Source Voltage		$V_{GS}$	w 20	V
Single Pulsed Avalanche Energy(L=0.5mH)		$E_{AS}$	720	mJ
Avalanche Current		$I_{AS}$	41	A
Total Power Dissipation		$P_D(T_C=25^\circ C)$	150	W
Junction and Storage Temperature Range		$T_J, T_{STG}$	-55 to 150	
Thermal Resistance-Junction to Ambient	Steady-State	$R_{JA}$	62.5	/W
Thermal Resistance-Junction to Case	Steady-State	$R_{JC}$	1.56	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$I_D=250\mu A, V_{GS}=0V$	60	70		V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=60V, V_{GS}=0V$			1.0	$\mu A$
Gate-Body leakage current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$			$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	2.0	2.9	4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$		5.7	7	

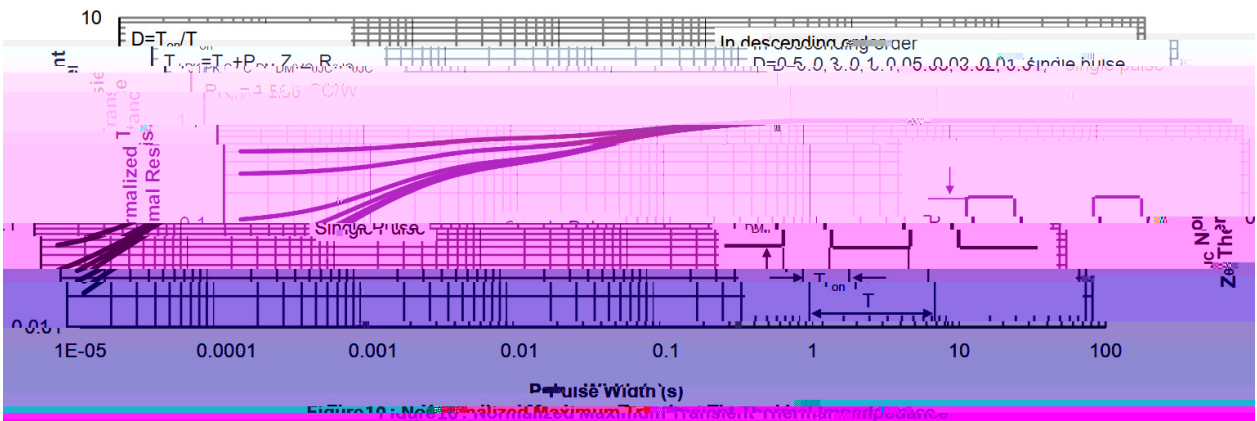
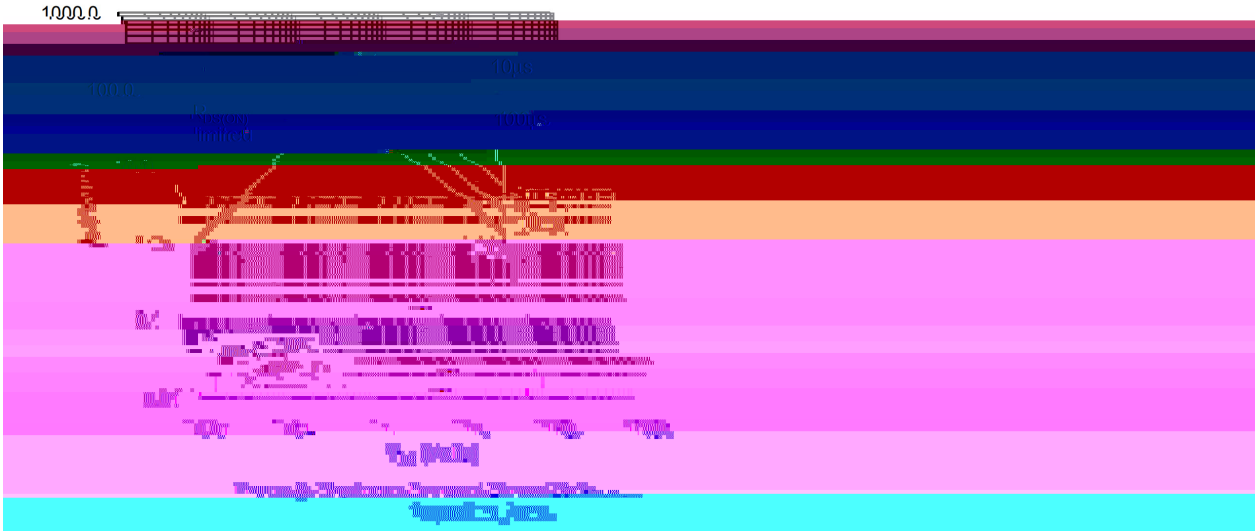
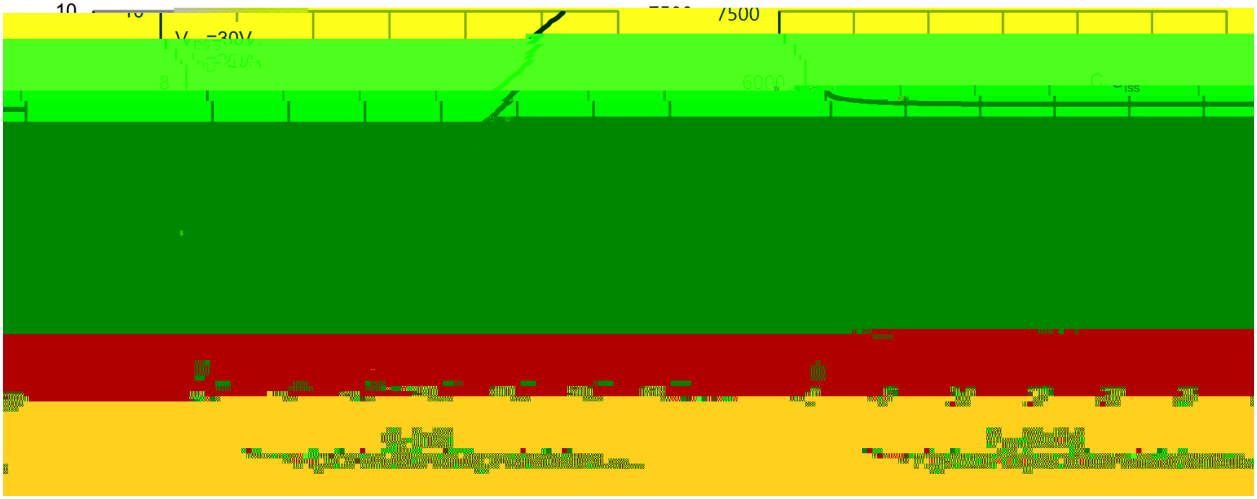
**/ Electrical Characteristics(Ta=25 )**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=30V$ $R_L=1.5\Omega$ $R_{GEN}=3\Omega$		21		ns
Turn-On Rise Time	$t_r$			23		
Turn-Off Delay Time	$t_{d(off)}$			35		
Turn-Off Fall Time	$t_f$			4.2		

**/ Electrical Characteristic Curve**

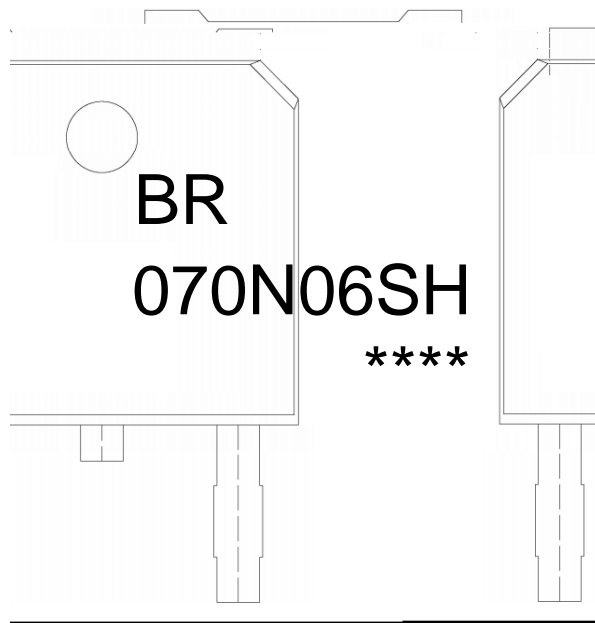


**/ Electrical Characteristic Curve**





**/ Marking Instructions**



BR

070N06SH

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Note:

BR: Company Code

070N06SH: Product Type Code

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

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