

BRCS070N06SHRA

Rev.A Jul.-2024



DATA SHEET

TO-220 氮化镓 MOSFET

N-CHANNEL MOSFET in a TO-220 Plastic Package.

$V_{DS}=60V$ I_D

绝对最大值 / Absolute Maximum Ratings(Ta=25 ℃)

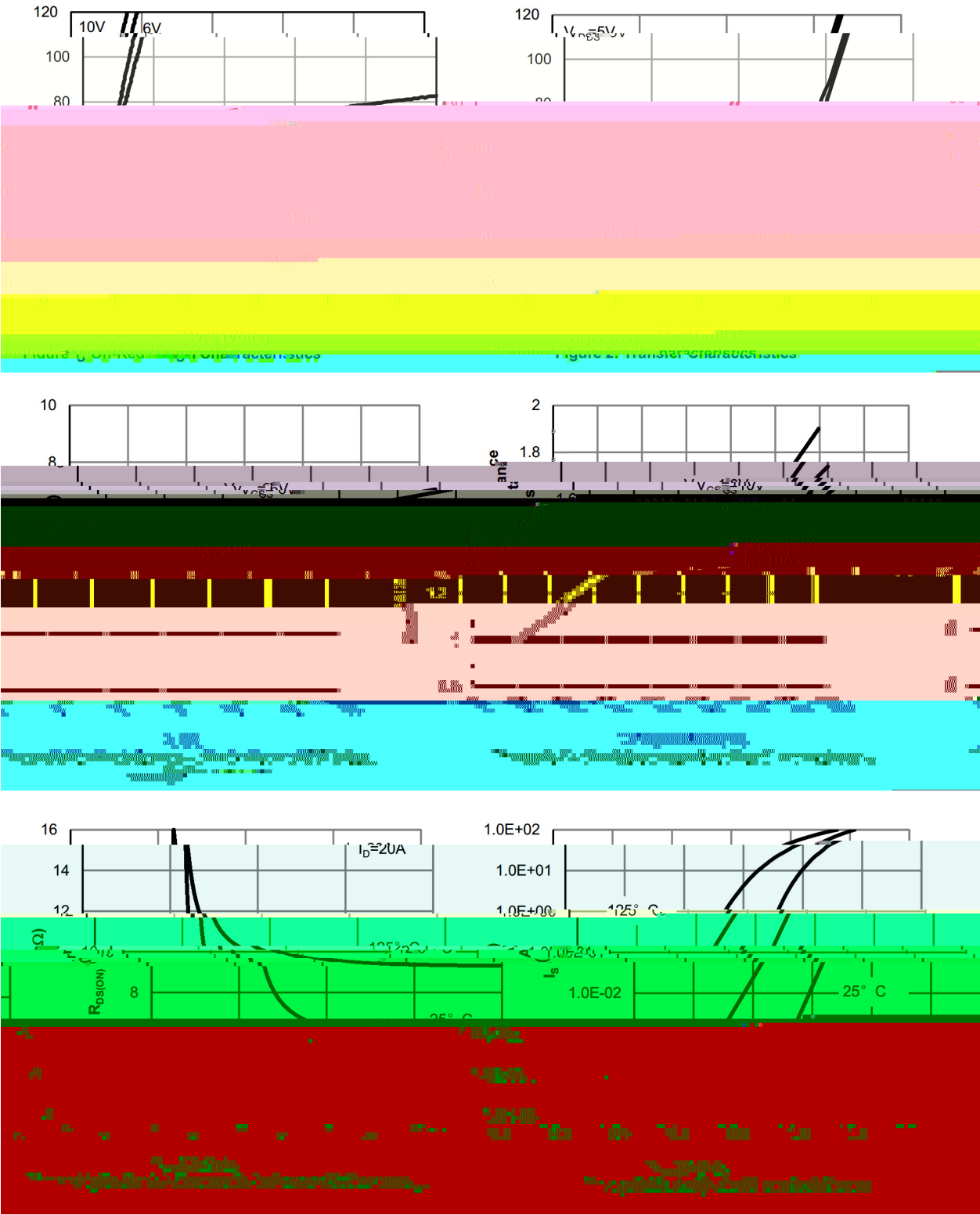
参数 Parameter		符号 Symbol	额定值 Rating	单位 Unit
Drain-Source Voltage		V_{DS}	60	V
Drain Current		$I_D(T_C=25\text{℃})$	106	A
Pulsed Drain Current		I_{DM}	376	A
Gate-Source Voltage		V_{GS}	±20	V
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	720	mJ
Avalanche Current		I_{AS}	41	A
Total Power Dissipation		$P_D(T_C=25\text{℃})$	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}	0.83	

电 学 特 征 / Electrical Characteristics(Ta=25 ℃)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	BV_{DS}	$I_D=250\mu A, V_{GS}=0V$	60	70		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60V, V_{GS}=0V$			1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			±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	mΩ
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=6V, I_D=10A$		6.2	12	mΩ
Diode Forward Voltage	V_{SD}	$I_S=1A, V_{GS}=0V$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V, V_{GS}=0V, f=1.0MHz$		5590		pF
Output Capacitance	C_{oss}			295		
Reverse Transfer Capacitance	C_{rss}			185		
Gate resistance	R_g	$V_{GS}=0V, V_{DS}=0V, f=1MHz$		0.77		
Total Gate Charge	Q_g	$V_{GS}=10V, V_{DS}=30V, I_D=20A$		53		nC
Gate Source Charge	Q_{gs}			17		
Gate Drain Charge	Q_{gd}			5		

v "Q

Electrical Characteristic Curve



Electrical Characteristic Curve

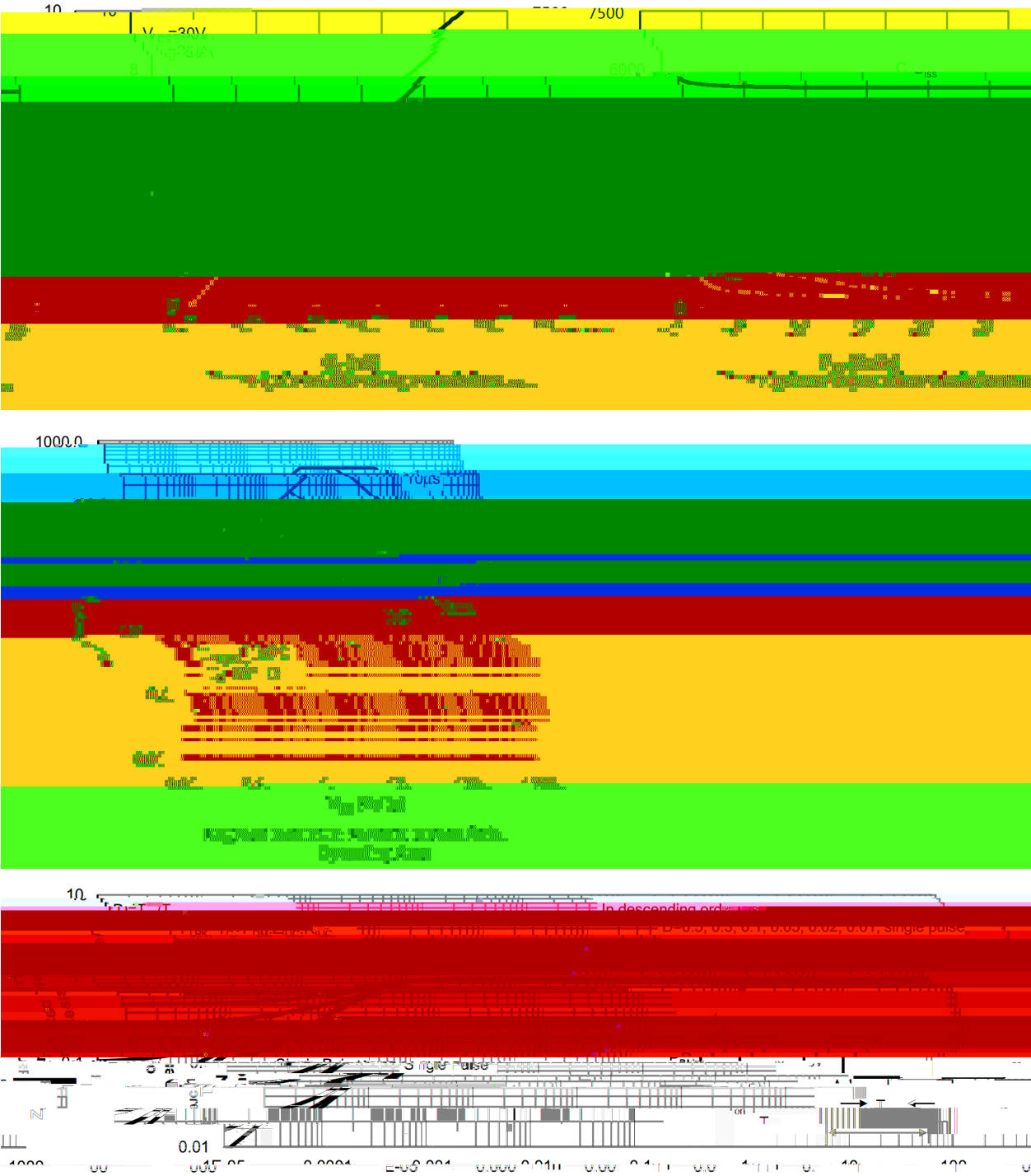
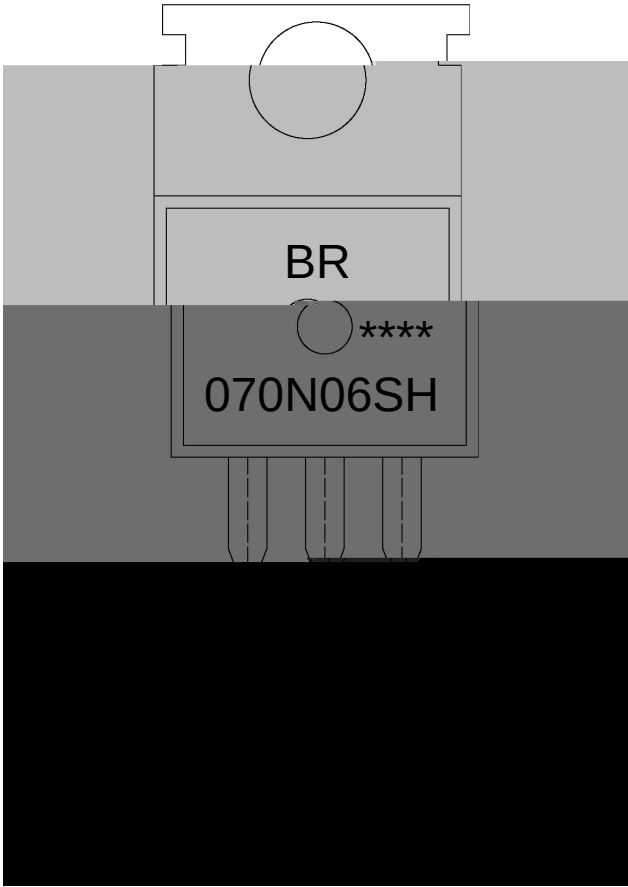


Figure10: Normalized Maximum Transient Thermal Impeda

4. 1. 2 / Marking Instructions



3:3Q39VK
EU
3:3Q39VK

Note:
BR: Company Code
070N06SH: Product Type Code
****: Lot No. Code, code change with Lot No

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