

BRCS350P016MA

Rev.A Apr.-2025



蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET

SOT-23 3-Pin MOSFET

S-CHANNEL MOSFET in a SOT-23 Plastic Package.

$V_{GS} = 4.5V$ @ $f_{sw} = 0.1MHz$

$U_{GS(RQ)} = 0.7V$ @ $V_{DS} = 15V$; $I_D = 18mA$

$U_{GS(RQ)} = 0.5V$ @ $V_{DS} = 16V$; $I_D = 18mA$

$U_{GS(RQ)} = 0.4V$ @ $V_{DS} = 18.7V$

Power Dissipation

Power Management in Notebook computer, Portable Equipment and Battery powered systems.

MOSFET Equivalent Circuit

/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-16	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	I_D	-5.0	A
Pulsed Drain Current	I_{DM}	-20	A
Power Dissipation for Single Operation	P_D	0.7	W
Maximum Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	$-55^\circ\text{C} \sim 150^\circ\text{C}$	
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	179	$^\circ\text{C/W}$

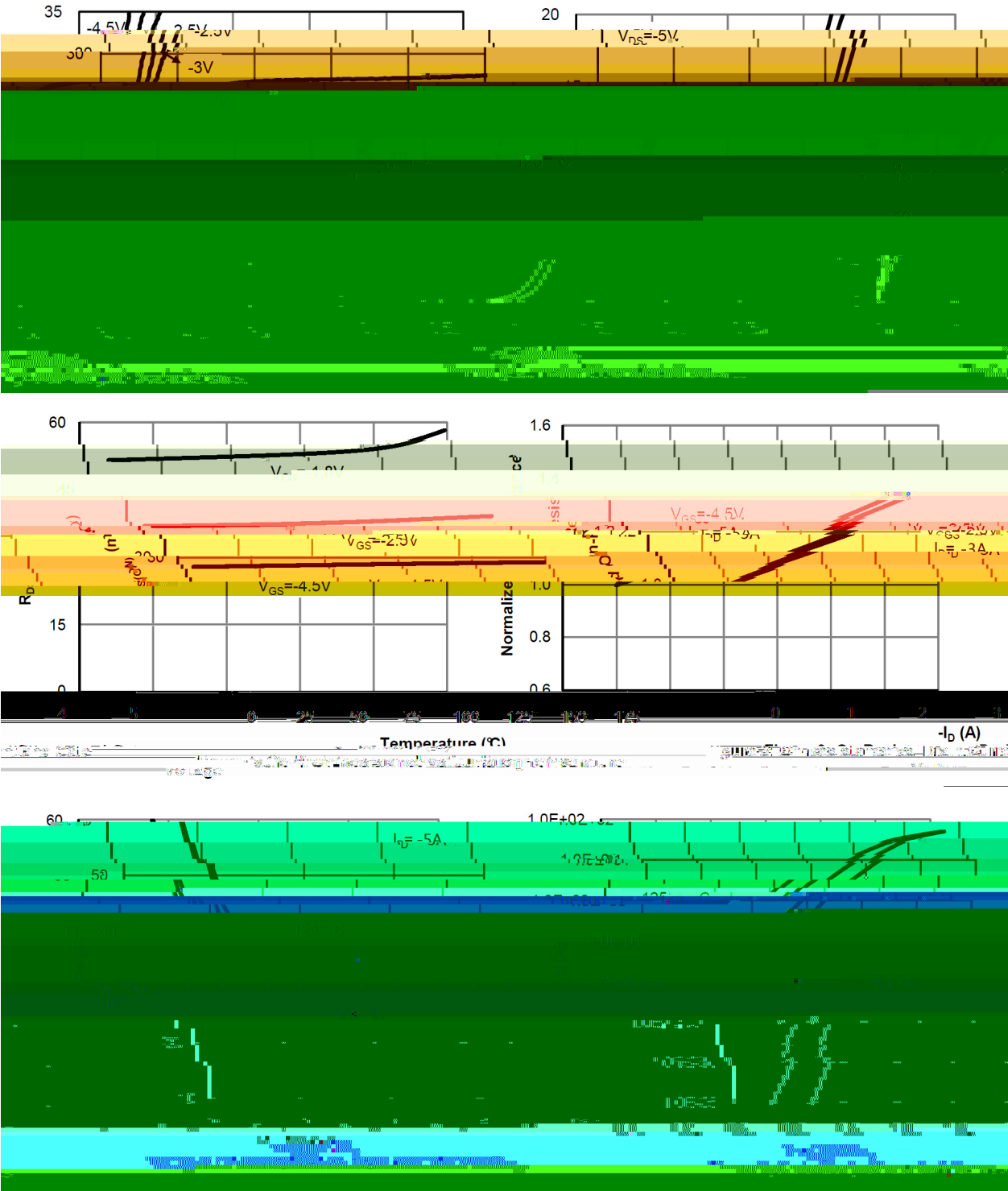
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$I_D=-250\mu\text{A}$ $V_{GS}=0\text{V}$	-16	-17.8		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-15\text{V}$ $V_{GS}=0\text{V}$			-1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}$ $V_{GS}=\pm 12\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu\text{A}$	-0.4	-0.62	-1.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-4.5\text{V}$ $I_D=-5\text{A}$		28.5	35	m Ω
		$V_{GS}=-2.5\text{V}$ $I_D=-3\text{A}$		38.8	55	
		$V_{GS}=-1.8\text{V}$ $I_D=-1\text{A}$		54		
Diode Forward Voltage	V_{SD}	$I_S=-1\text{A}$ $V_{GS}=0\text{V}$			-1.2	V
Reverse Recovery Time	t_{rr}	$V_{DS}=-10\text{V}$, $I_D=-4\text{A}$ $dI_{SD}/dt = 100 \text{ A}/\mu\text{s}$		18.7		ns
Reverse Recovery Charge	Q_{rr}			4		nC
Gate resistance	R_g	$V_{GS}=0\text{V}$, $f=1\text{MHz}$ $V_{DS}=0\text{V}$		8.5		Ω
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}$ $f=1\text{MHz}$ $V_{DS}=-15\text{V}$		495		pF
Output Capacitance	C_{oss}			100		
Reverse Transfer Capacitance	C_{rss}			80		

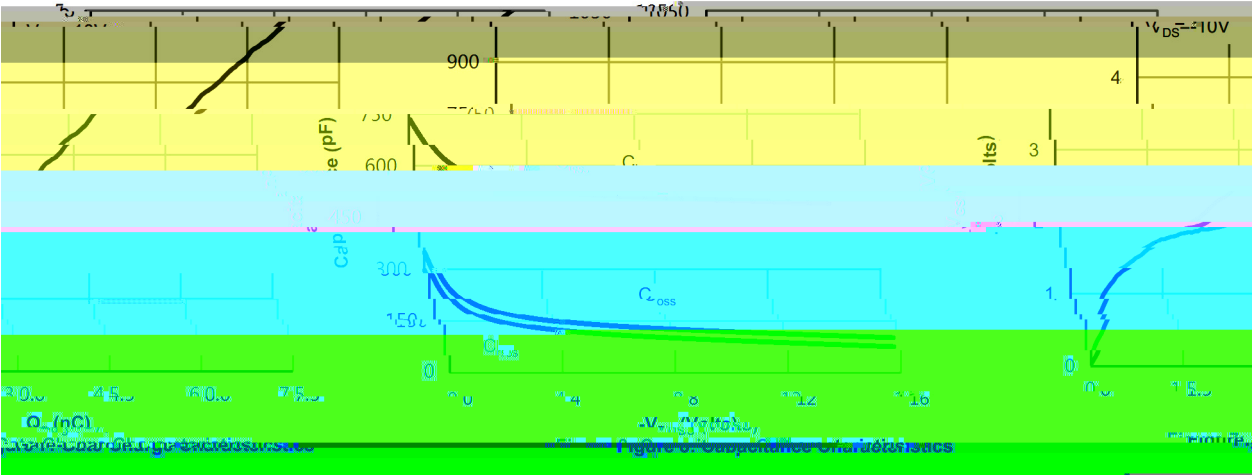
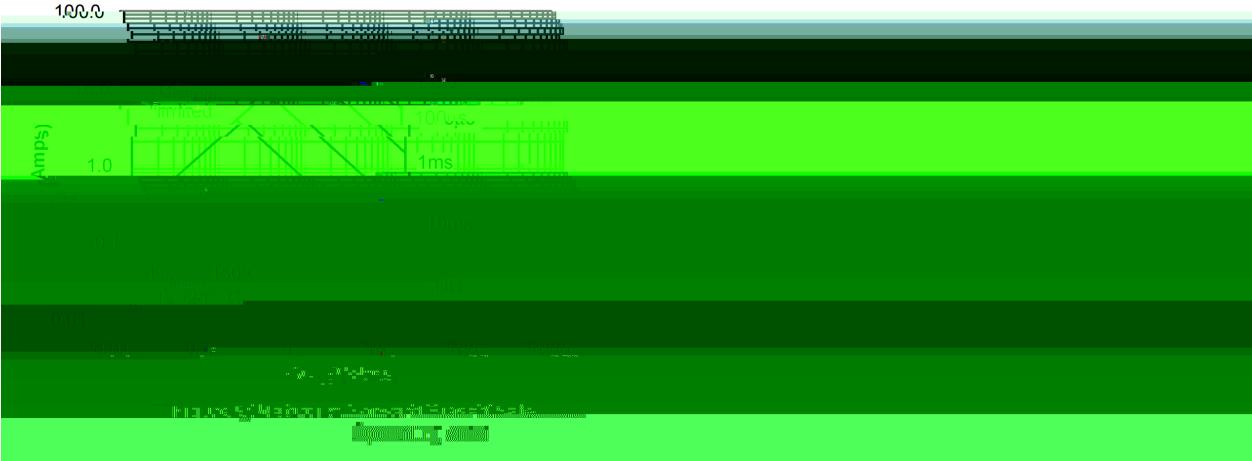
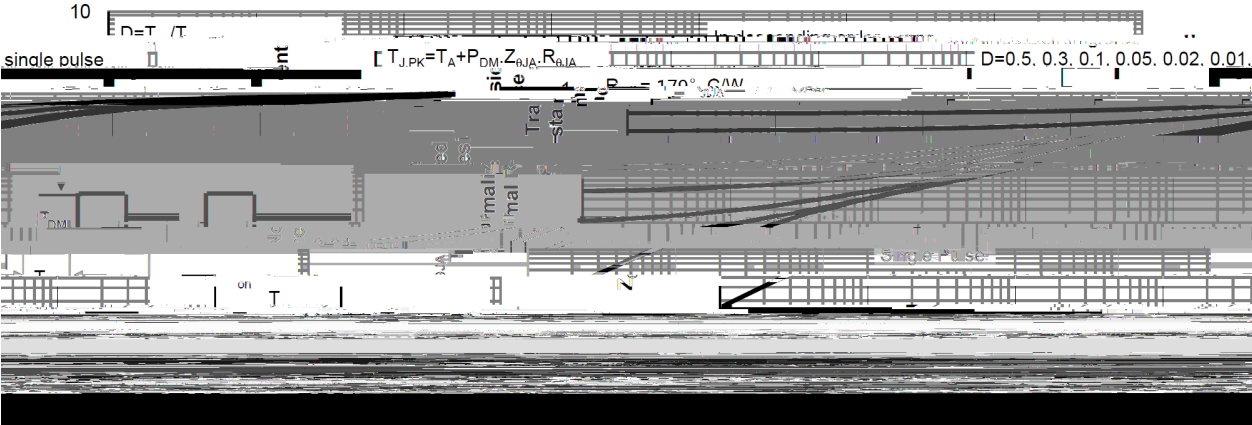
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q _g	V _{GS} =-4.5V, V _{DS} =-10V, RL=2.5Ω		5.7		nC
Gate Source Charge	Q _{gs}			0.3		
Gate Drain Charge	Q _{gd}			1.9		
Turn-On Delay Time	t _{d(on)}	V _{GS} =-4.5V V _{DS} =-10V RL=2.5Ω R _g =3Ω		8.3		ns
Turn-On Rise Time	t _r			32.3		
Turn-Off Delay Time	t _{d(off)}			38.2		
Turn-Off Fall Time	t _f			49.4		

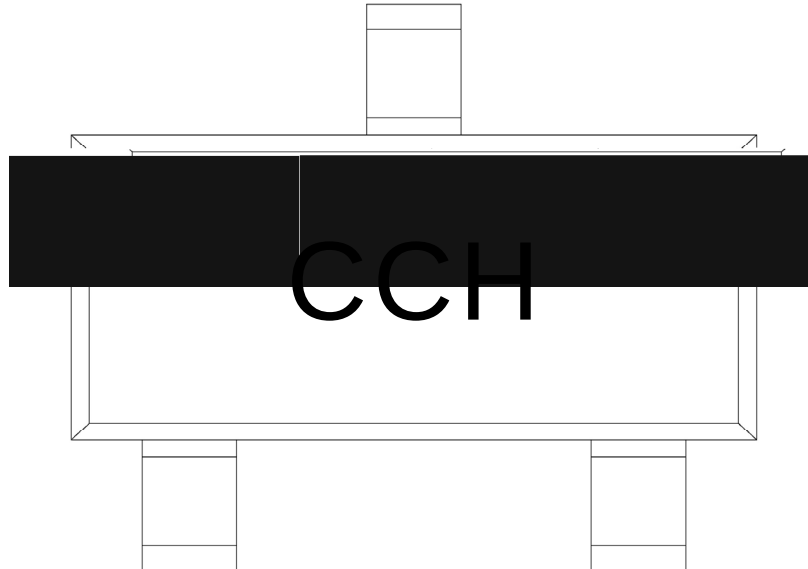
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Marking Instructions



CCH

H: 公司代码

CC: 产品类型代码

Note:

H: Company Code

CC: Product Type Code

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