

# BRCS035N06SHBDQ

Rev.A Feb.-2025

## / Descriptions

TO-263 N

N-CHANNEL MOSFET in a TO-263 Plastic Package.

## / Features

$V_{DS}=60V$   $I_D=162A$

$R_{DS(on)}@10V$  3.5m (Type.3.3m )

AEC-Q101

Qualified to AEC-Q101 Standards for High Reliability,

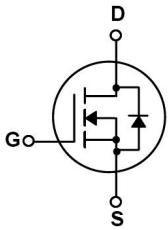
HF Product.

## / Applications

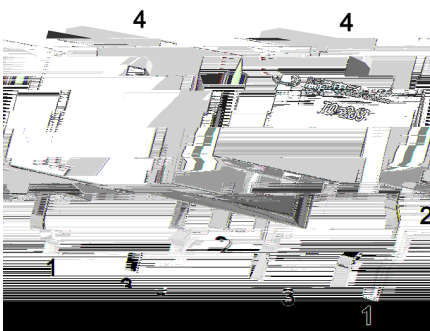
BMS

High frequency switching and synchronous rectification,BMS,Motor, Meet the stringent requirements of automotive applications.

## / Equivalent Circuit



## / Pinning



PIN1 G

PIN 2 4 D

PIN 3 S

## / Marking

See Marking Instructions.

## / Absolute Maximum Ratings(Ta=25 )

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		$V_{DSS}$	60	V
Drain Current		$I_D(T_C=25)$	162	A
Pulsed Drain Current		$I_{DM}$	466	A
Gate-Source Voltage		$V_{GS}$	20	V
Single Pulsed Avalanche Energy(L=0.5mH)		$E_{AS}$	820	mJ
Avalanche Current		$I_{AS}$	40.5	A
Total Power Dissipation		$P_D(T_C=25)$	170	W
Junction and Storage Temperature Range		$T_J, T_{STG}$	-55 to 150	
Thermal Resistance-Junction to Ambient	t 10s	$R_{JA}$	23	/W
	Steady-State		75	
Thermal Resistance-Junction to Case	Steady-State	$R_{JC}$	0.74	

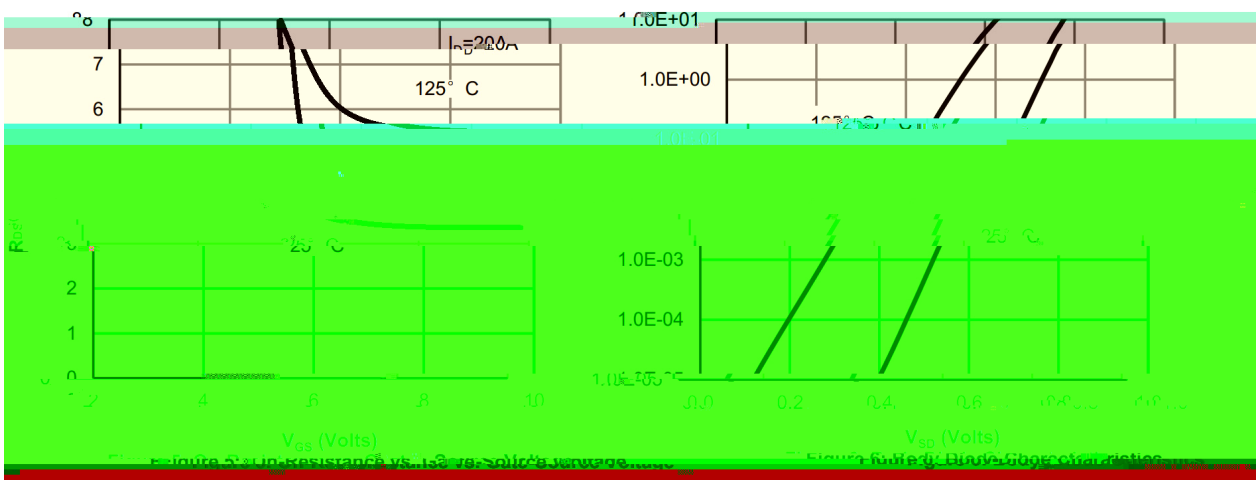
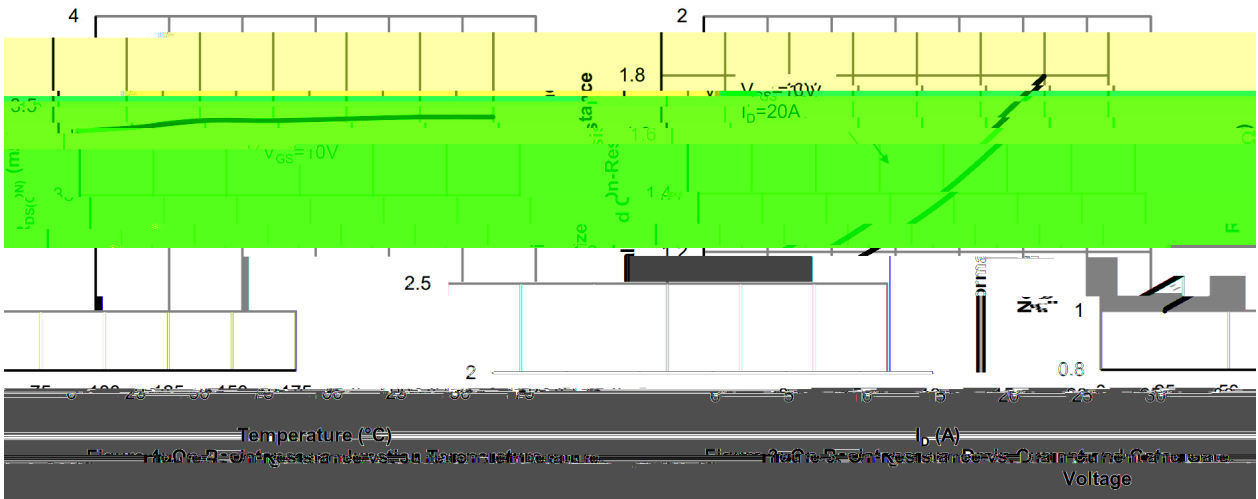
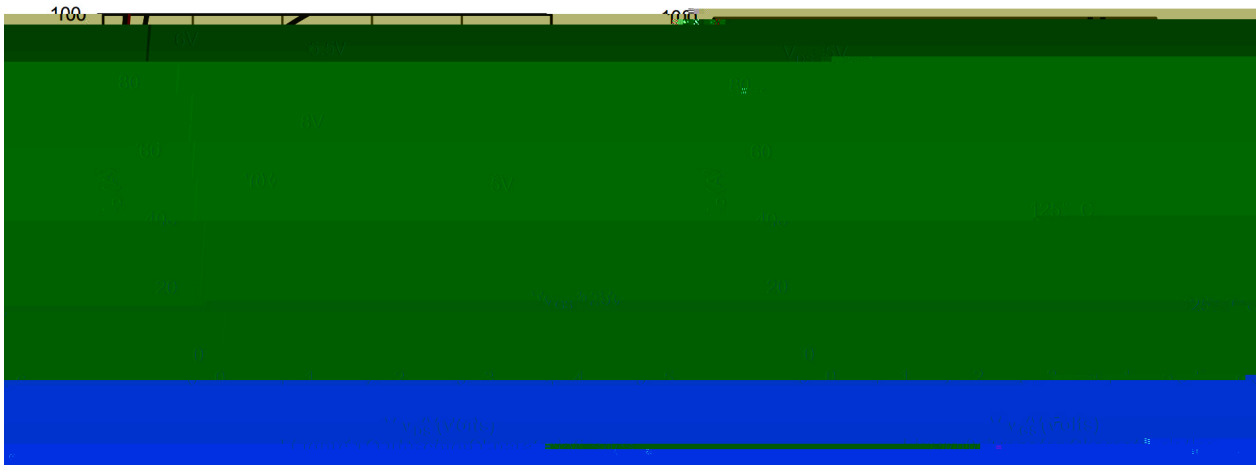
## / Electrical Characteristics(Ta=25 )

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
	$BV_{DSS}$	$I_D=250\mu A, V_{GS}=0V$	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		4.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=20A$		3.3	3.5	m
Diode Forward Voltage	$V_{SD}$	$I_S=1A, V_{GS}=0V$			1.2	V
Input Capacitance	$C_{iss}$	$V_{DS}=25V, V_{GS}=0V, f=1.0MHz$		4400		pF
Output Capacitance	$C_{oss}$			1400		
Reverse Transfer Capacitance	$C_{rss}$			73		
Gate resistance	$R_g$	$V_{GS}=0V, V_{DS}=0V, f=1MHz$		1.1		
Total Gate Charge	$Q_g$	$V_{GS}=10V, V_{DS}=30V, I_D=20A$		42		nC
Gate Source Charge	$Q_{gs}$			14		
Gate Drain Charge	$Q_{gd}$			11		

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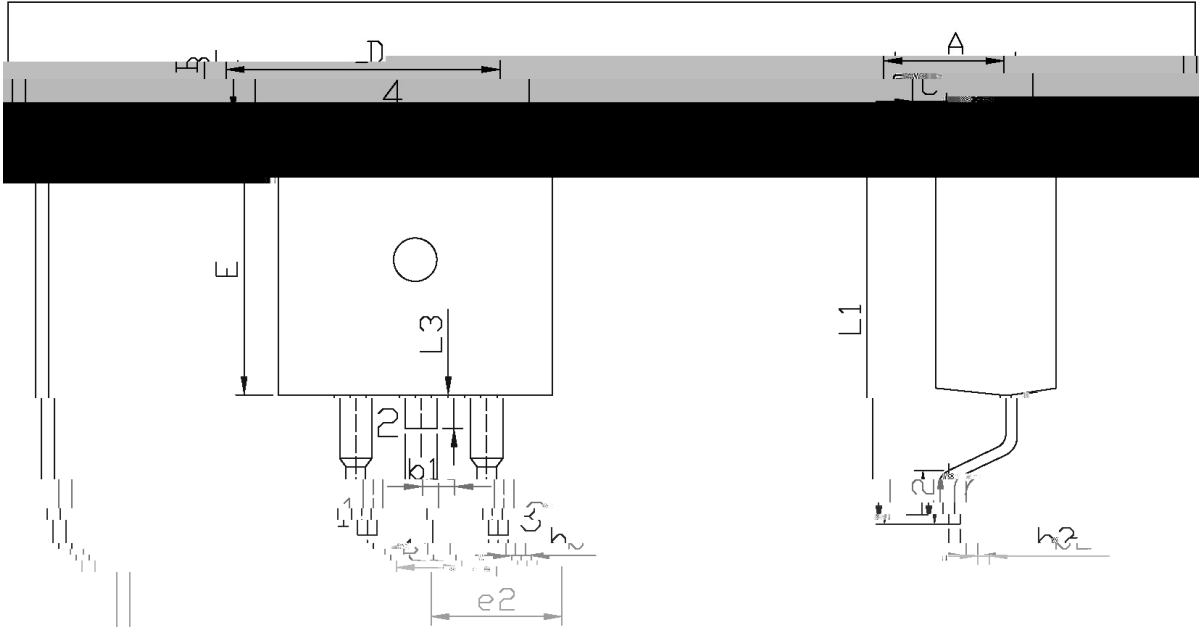
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/ Electrical Characteristic Curve



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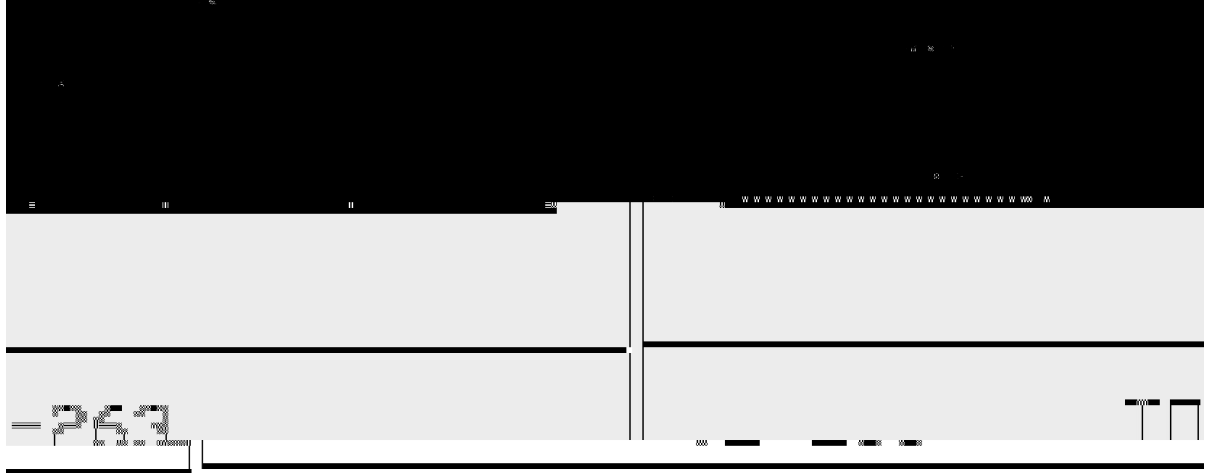
**/ Package Dimensions**



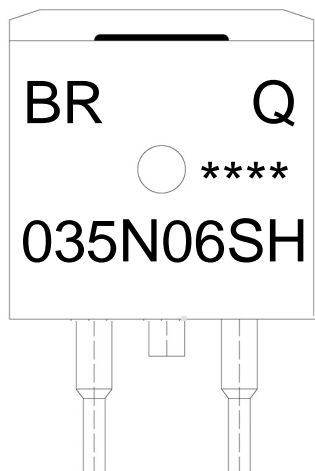
单位: mm

Dimensions in Millimeters

Max	Min	Max	Min
9.40	4.30	4.70	9.00
2.74	1.00	1.40	2.34



**/ Marking Instructions**



BR

Q

035N06SH

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Note:

BR: Company Code

Q: Automobile halogen-free product Code

035N06SH: Product Type Code

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

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**蓝箭电子**  
BLUE ROCKET ELECTRONICS

DATA SHEET

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