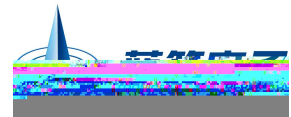


BRD65R380C

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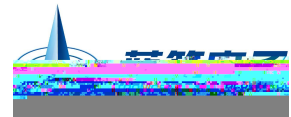
DATA SHEET

/ Revised record

A	2022.4.21	ALL	AOS-AOD380A60		
B	2022.5.26	2,3,4,5	YC-RMX65R380SN_ReV1.0		

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DATA SHEET

/ Descriptions

TO-252 N 650V

N-CHANNEL 650V Super-Junction Power MOSFET in a TO-252 Plastic Package.

/ Features

$R_{DS(on)}$ C_{rss}

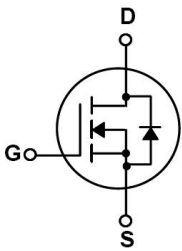
Low $R_{DS(on)}$, low gate charge, low C_{rss} , fast switching, HF Product.

/ Applications

DC/DC

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



PIN1 G

PIN 2 D

PIN 3 S

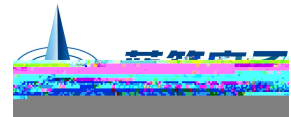
PIN 4 D

/ Marking

See Marking Instructions.

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**DATA SHEET**

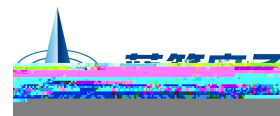
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	650	V
Drain Current	$I_D(T_C=25^\circ\text{C})$	11	A
Drain Current - Pulsed	I_{DM}	44	A
Gate-Source Voltage	V_{GS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	277	mJ
Avalanche Current	I_{AS}	8	A
Power Dissipation	$P_D(T_C=25^\circ\text{C})$	125	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ\text{C}$
Junction-to-Case	R_{JC}	1	$^\circ\text{C/W}$
Junction-to-Ambient	R_{JA}	55	$^\circ\text{C/W}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu\text{A}$	650	700		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=650V$ $V_{GS}=0V$ $T_J=25^\circ\text{C}$			1.0	μA
Gate-Body Leakage Current, Forward	I_{GSS}	$V_{GS}=\pm 30V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu\text{A}$	2.5	3.3	4.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=5.5A$		320	380	m
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_{SD}=1A$ $T_J=25^\circ\text{C}$			1.2	V
Gate Resistance	R_g	$V_{GS}=0V$ $f=1.0\text{MHz}$		4.1		
Input Capacitance	C_{iss}	$V_{DS}=100V$ $V_{GS}=0V$ $f=1.0\text{MHz}$		735		pF
Output Capacitance	C_{oss}			35		pF
Reverse Transfer Capacitance	C_{rss}			0.45		pF

Turn

BRD65R380C

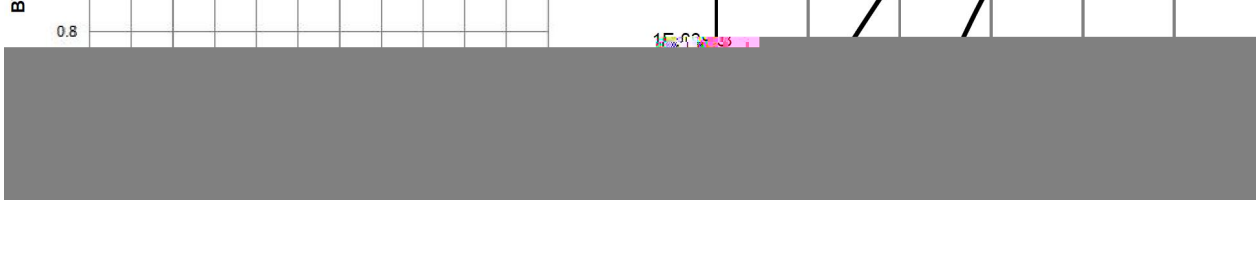
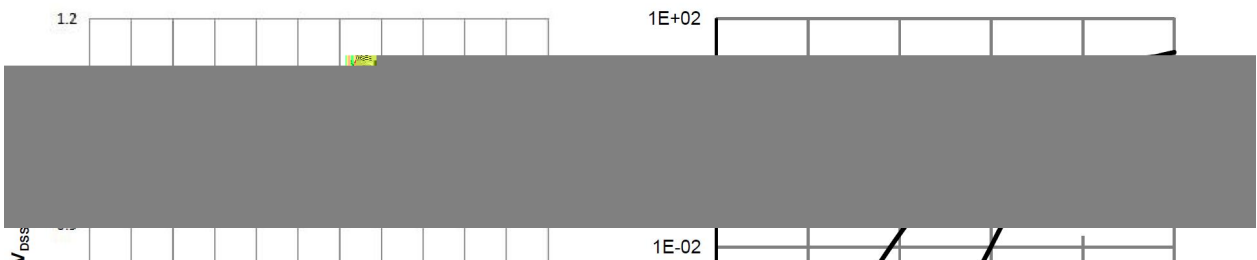
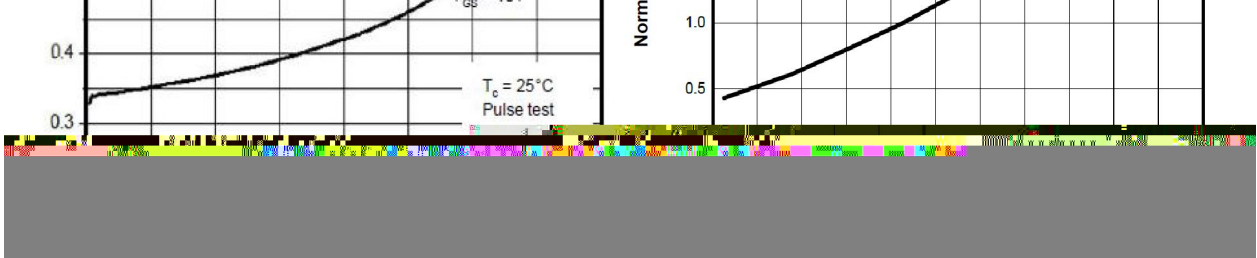
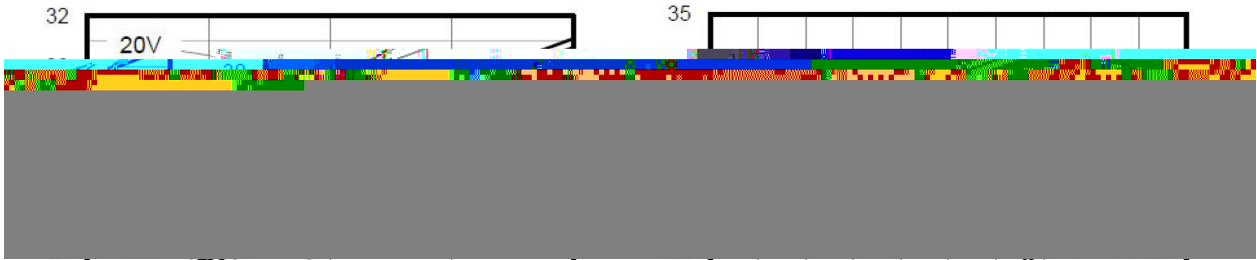
Rev.B May.-2022



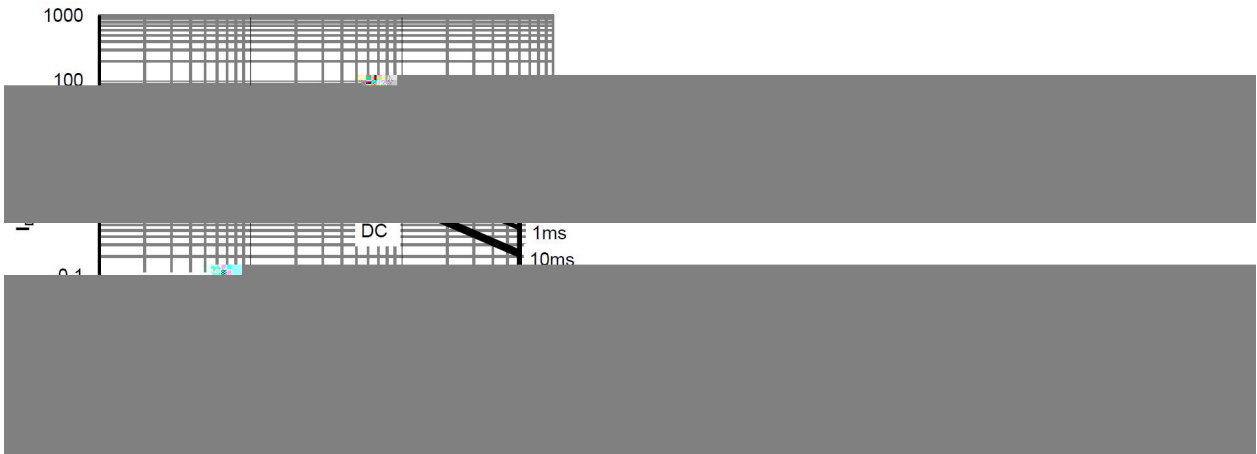
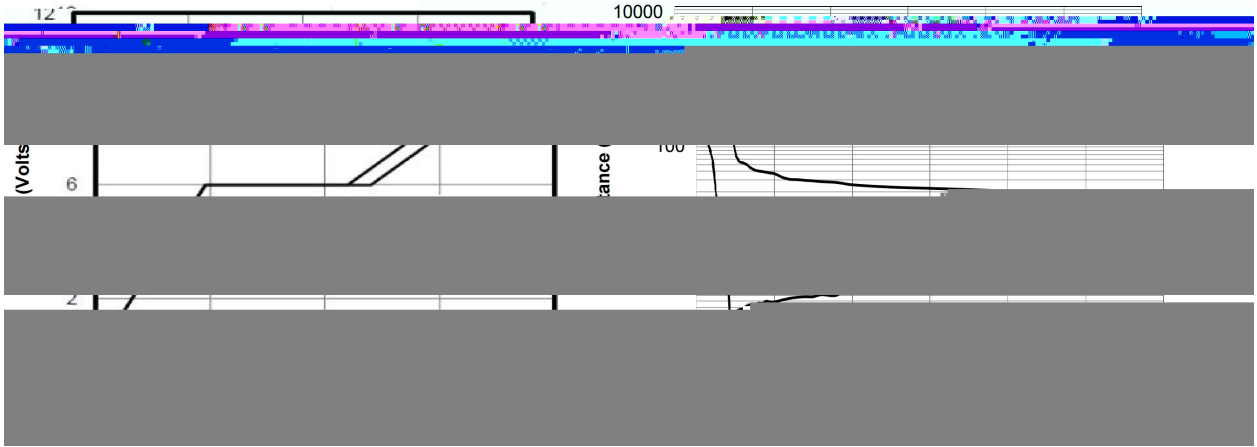
DATA SHEET

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Continuous Diode Forward Current	I_S				11	A
Total Gate Charge	Q_g	$V_{DS}=480V$ $I_D=5.5A$ $V_{GS}=10V$		19.2		nC
Gate-Source Charge	Q_{gs}			3.1		nC
Gate-Drain Charge	Q_{gd}			8.2		nC
Reverse recovery time	T_{rr}	$V_R=400V$, $I_F=5.5A$, $dI_F/dt=100A/\mu s$		310		ns
Reverse recovery charge	Q_{rr}			2.8		uC

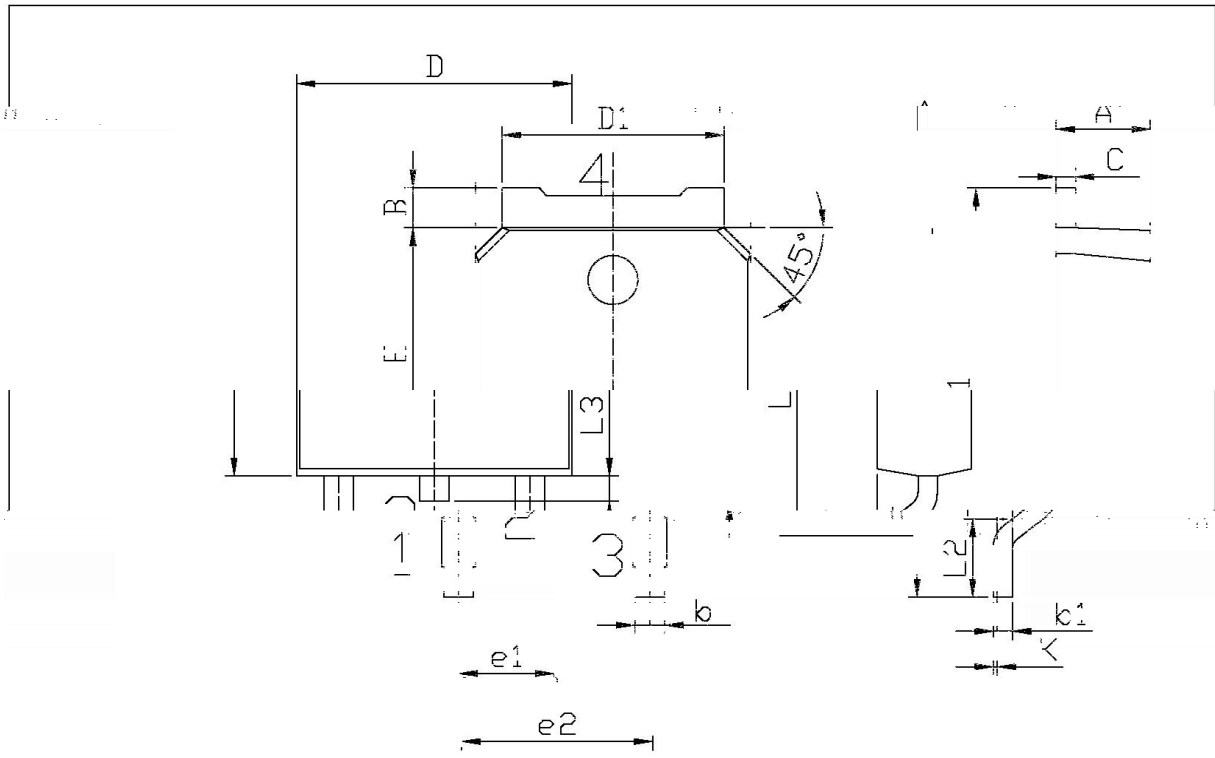
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Package Dimensions



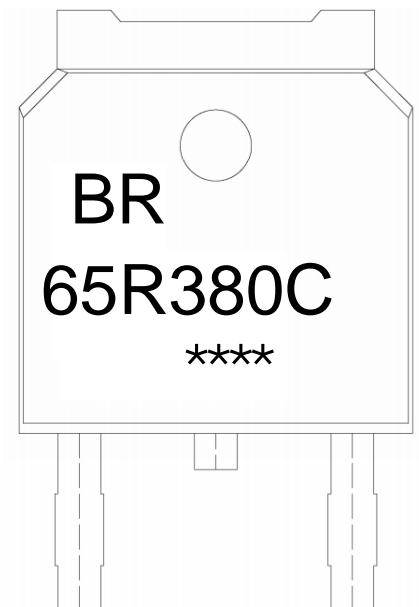
单位: mm

Dimension in Millimeter		Dimension in Millimeter	
Symbol	Min	Symbol	Min
A	2.40	e1	2
B	0.95	e2	2
b	0.70	L1	0.85
b1	0.45	L2	1.70
C	0.45	L3	0.60
D	6.45	L	0.90
D1	5.70	k	0.90
E	5.70	k1	0.90

T0-252



/ Marking Instructions



BR

Note:

BR: Company Code

65R380C: Product Type Code

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

() /

1
2
3

温度

度

Note:

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

Resistance Soldering Heat Test Conditions

245±5°C

Temp.:260±5°C

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 ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-252	2,500	2	5,000	6	30,000	13" x16	360x360x50	380x335x366

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box			