

/ Descriptions

TO-252 SiC N MOS

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

/ Features

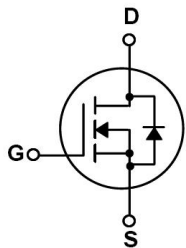
 $V_{DS}=650V$ $I_D=20A$ $R_{DS(on)}@15V$ 208m (Type.160m) $R_{DS(on)}@18V$ 180m (Type.124m)

/ Applications

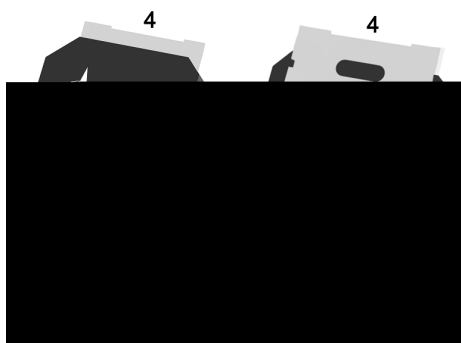
LED PD PC

LED driver, PD charger, PC adapter, Air-conditioning, E-bike charger

/ Equivalent Circuit



/ Pinning



PIN1 G

PIN 2 D

PIN 3 S

PIN 4 D

/ Marking

See Marking Instructions.

BRSC65R180ZDP

Rev.B Jun.-2026

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	650	V
Continuous DC Drain Current for $R_{th(j-c,typ.)}$, Limited by $T_{VJ(max)}$	$I_D(T_c=25^\circ C)$	20	A
	$I_D(T_c=100^\circ C)$	14.4	A
Peak Drain Current, tp Limited by $T_{VJ(max)}$	I_{DM}	34.5	A
Gate-Source Max Voltage	$V_{GS,max}$	-10/+22	V
Gate-Source Operate Voltage	$V_{GS,op}$	0/+15	V
Single Pulse Avalanche Energy	E_{AS}	28	mJ
Power Dissipation or $R_{th(j-c,typ.)}$	$P_D(T_c=25^\circ C)$	82	W
Operating and Storage Temperature Range	T_{VJ}, T_{STG}	-55 to 175	
MOSFET/Body Diode Junction-Case Thermal Resistance	$R_{th(j-c)}$	1.83	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=0/15V$ $L=600$ H V_{DD}				

BRSC65R180ZDP

Ô ? d • Ž ¢ / Electrical Characteristic Curve

Ô ? d • Ž ¢ / Electrical Characteristic Curve

Ø □ =) ¢ / Package Dimensions

, M y f / Marking Instructions

BR
65R180Z
SC ****

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9) y K J´
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Note:

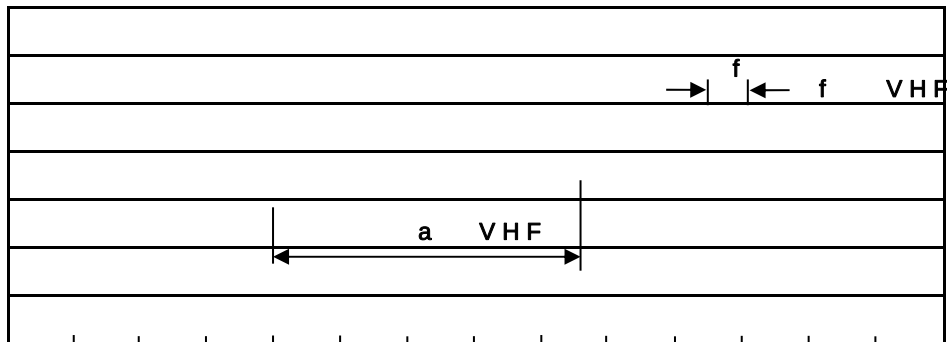
BR: Company Code

65R180Z: Product Type Code

SC: SiC

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

šWD t... •Žč (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6



^ačy

10• Ä ½ “† 150 ½180 - k ž • 60 ½90sec;

20• Q > “† 245 r5 - k ž • 4 Ò 5 r0.5sec;

30•D N ò i Ò 0 ,† 2 ½10 - /sec.

Note:

1.Preheating:150~180 - , Time:60~90sec.

2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“†y 260 r5 -

ž •y 10 r1 sec.

Temp.:260±5

Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ~ E	Units ;>û H					Dimension ;>û p . (unit /mm³)		
	Units/Reel /-	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box	Outer Boxç
TO-252	2,500	2	5,000	6	30,000	13 s ×16	360×360×50	380×335×366

ì' x / TUBE

Package Type 7>û ~ E	Units ;>û H					Dimension ;>û p . (unit /mm³)		
	Units/Tube /•1×	Tubes/Inner Box •1× /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Tube •1×	Inner Box	Outer Boxç
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

„Đy f / Notices

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