

BRD65R800C

Rev.A May.-2024



DATA SHEET

TO-252 .> // x N ?ú 3 650V

@ f Parameter	... Z Symbol	f > Rating	% y Unit
Drain-Source Voltage	V _{DSS}	650	V
Drain Current	I _D (T _c =25)	6	A
Drain Current - Pulsed	I _{DM}	24	A
Gate-Source Voltage	V _{GS}	±30	V
Single Pulsed Avalanche Energy	E _{AS}	50	mJ
Avalanche Current	I _{AS}	3.4	A
Power Dissipation	P _D (T _c =25)	45	W
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to 150	-
Junction-to-Ambient	R _{JA}	60	- /W
Junction-to-Case	R _{JC}	2.7	- /W

@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V I _D =250 A	650	690		V
Zero Gate Voltage Drain Current	I _{DSS}	V				

Electrical Characteristic Curve

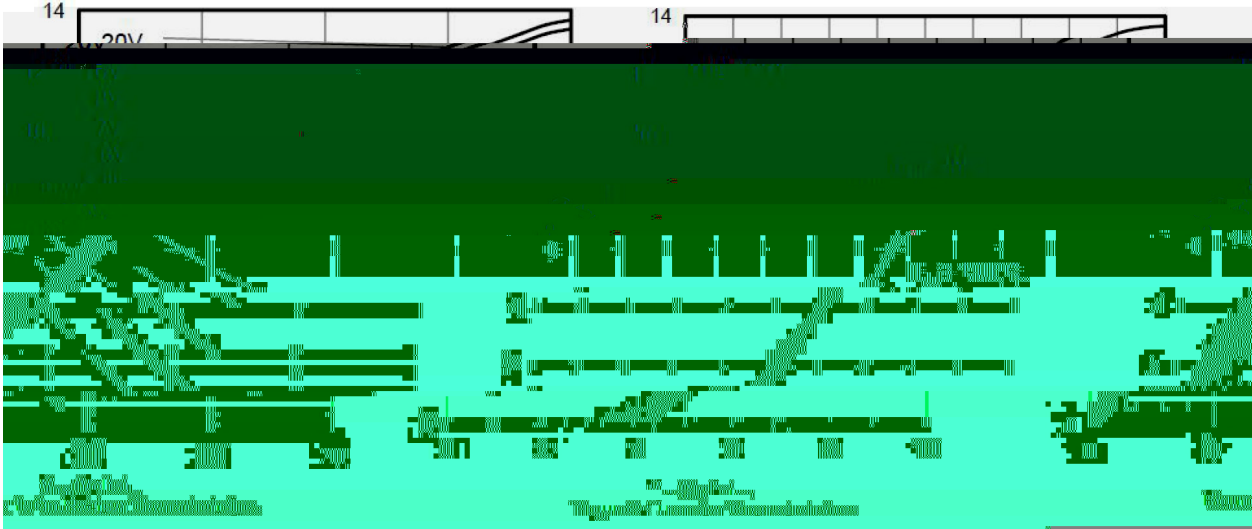
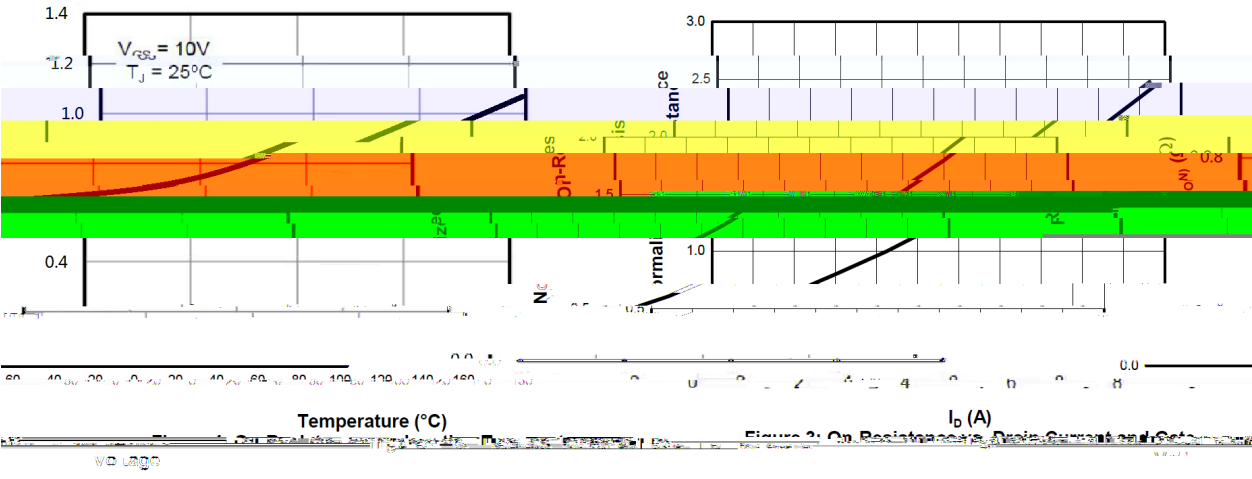
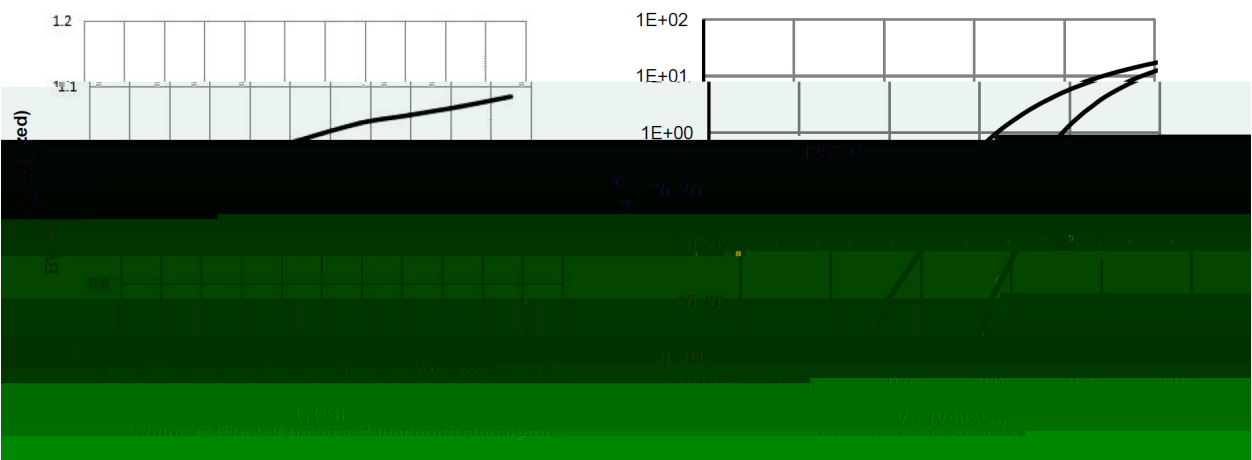
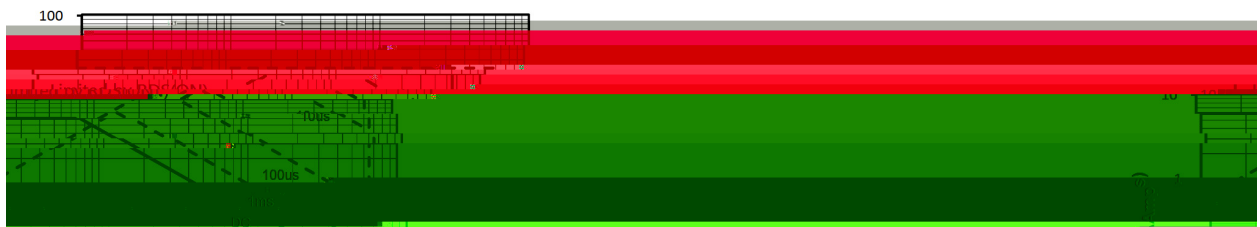
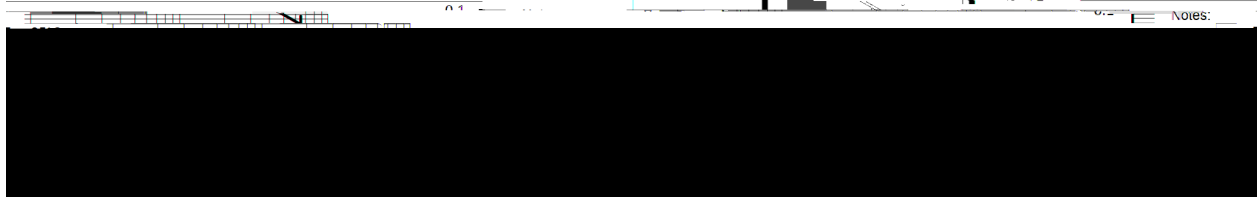
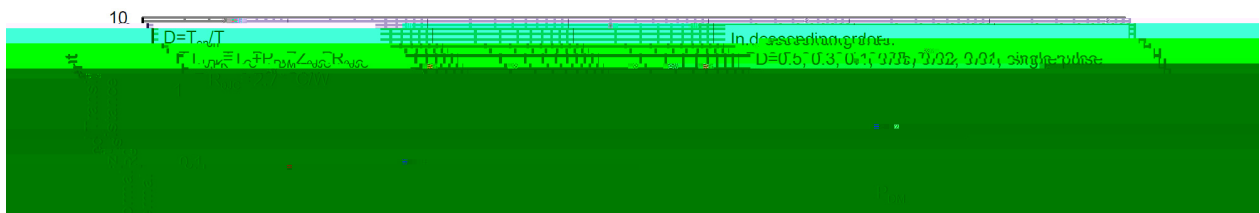
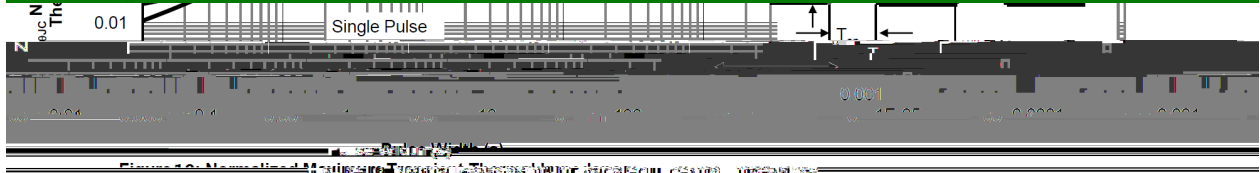
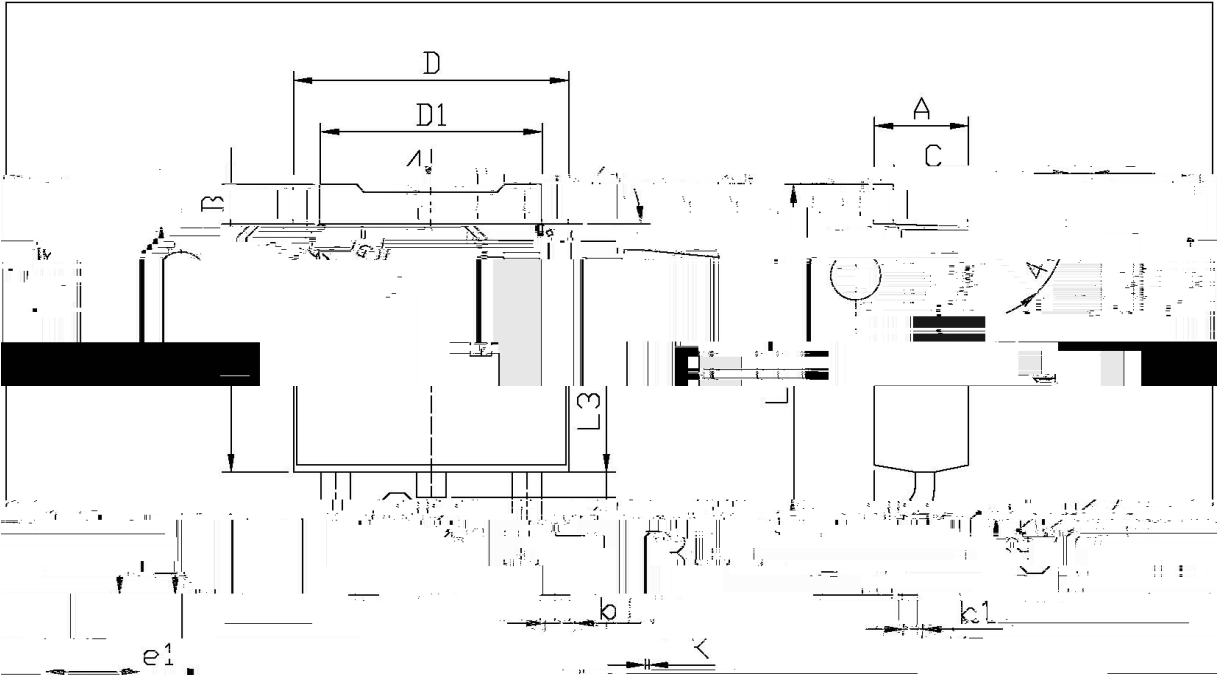


Figure 1 consists of two parts. Part (a) is a schematic diagram of the device structure, showing a p-type substrate, a 500 nm thick SiO₂ layer, and a 10 nm thick Al layer. Part (b) is a plot of the differential conductance G versus the bias voltage V_{bias} . The conductance is zero for $V_{\text{bias}} < 0$ and increases linearly for $V_{\text{bias}} > 0$, reaching a plateau at approximately 1000 G for $V_{\text{bias}} > 100$ mV. The inset shows the differential conductance G versus the bias voltage V_{bias} for a device with a 10 nm thick Al layer, showing a similar linear increase and plateau.



Ø □ =) ☉ / Package Dimensions

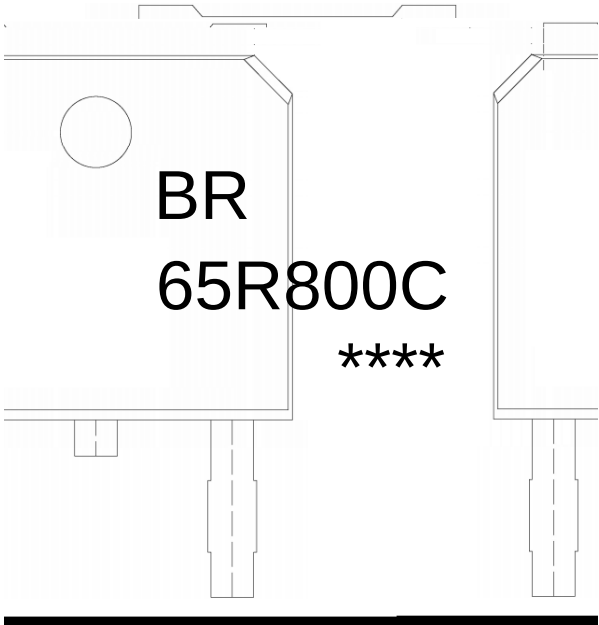


单位: mm

Dimensions		In Millimeters		Dimensions		In Millimeters	
Min	Max	Min	Max	Min	Max	Min	Max
0.95	1.05	0.95	1.05	2.24	2.34	0.95	1.05
0.70	0.75	0.70	0.75	4.73	4.79	0.70	0.75
1.95	2.05	1.95	2.05	0.45	0.55	1.70	1.75
0.45	0.55	0.45	0.55	0.60	0.65	0.60	0.65
5.10	5.50	5.10	5.50	0.00	0.10	0.00	0.10

TO-252

, M y f / Marking Instructions



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BR y , [W A
8) y ° Z W A
y ŷ D Z W A k š ŷ D Z J

Note:
BR: Company Code
65R800C: Product Type Code
****: Lot No. Code, code change with Lot No

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

ª ¢ y

- 1o• Ä ½ “ † 150 ½180 - k ž • 60 ½90sec;
- 2o• Q > “ † 245 r5 - k ž • 4 Ò 5 r0.5sec;
- 3o•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