

BRD65R600C

Rev.A Dec.-2023

TO-252 N 650V

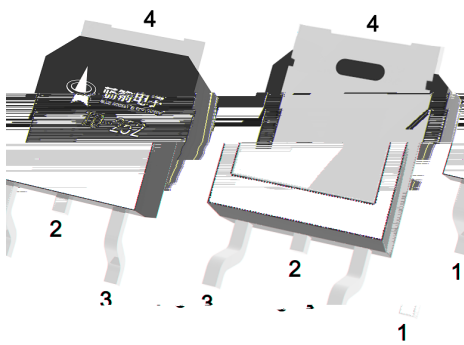
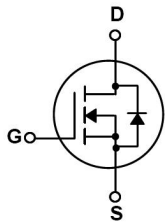
N-CHANNEL 650V Super-Junction Power MOSFET in a TO-252 Plastic Package.

$R_{DS(on)} \times Q_g$ 100%

ROHS

Very low $R_{DS(on)} \times Q_g$, 100% avalanche tested, RoHS compliant, HF Product.

For switch mode power supply, uninterruptible power supply, power factor correction.



PIN1 G

PIN 2 D

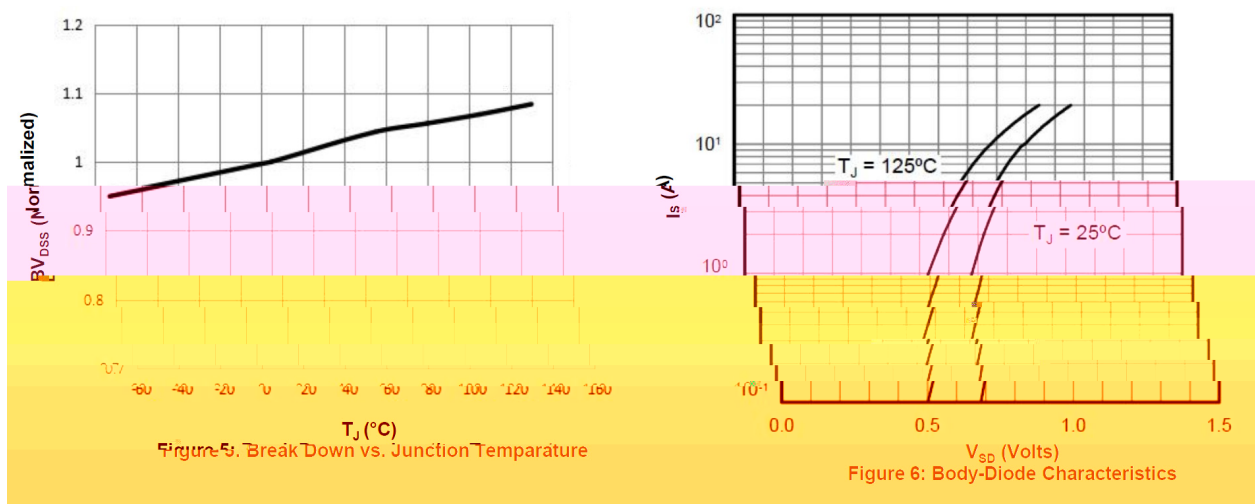
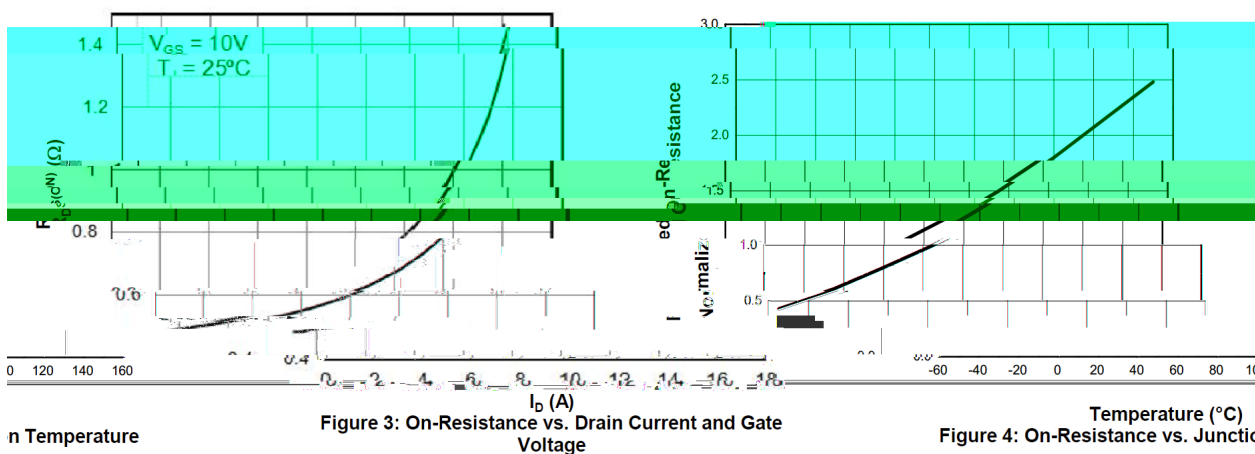
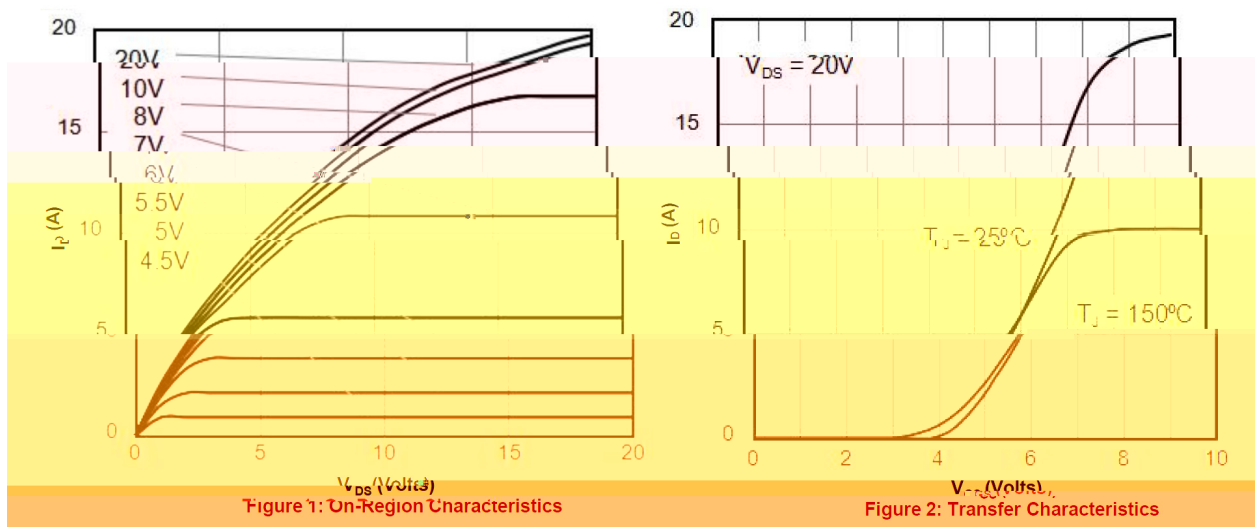
PIN 3 S

PIN 4 D

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Continuous Diode Forward Current	I_S				8.5	A
Total Gate Charge	Q_g	$V_{DS}=520V \quad I_D=3.5A$ $V_{GS}=10V$		2.8		nC
Gate-Source Charge	Q_{gs}			4.7		nC
Gate-Drain Charge	Q_{gd}			13.3		nC
Reverse recovery time	T_{rr}	$V_R=50V, I_F=3.5A,$ $dI_F/dt=100A/\mu s$		201		ns
Reverse recovery charge	Q_{rr}			1.3		uC

/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

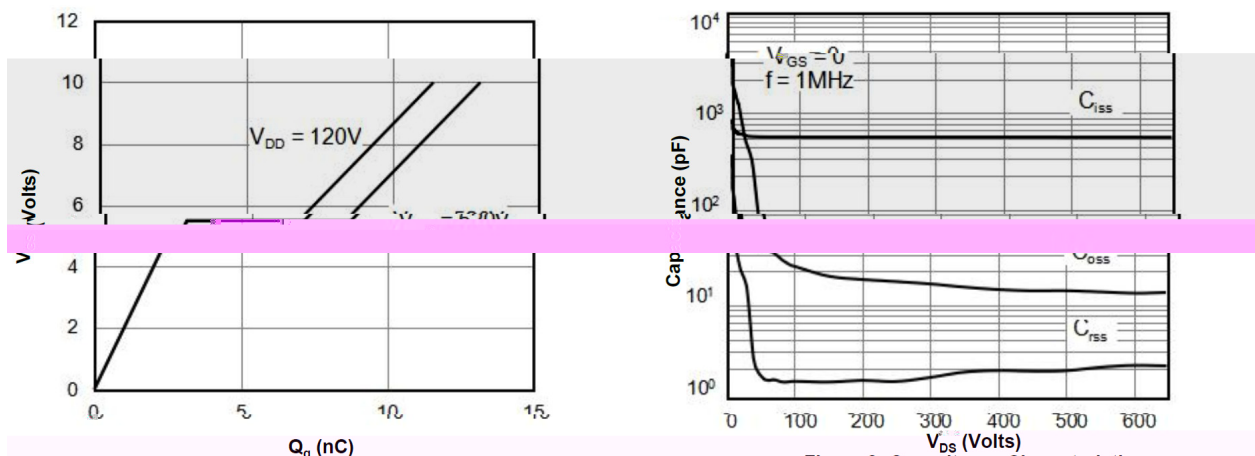


Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characteristics

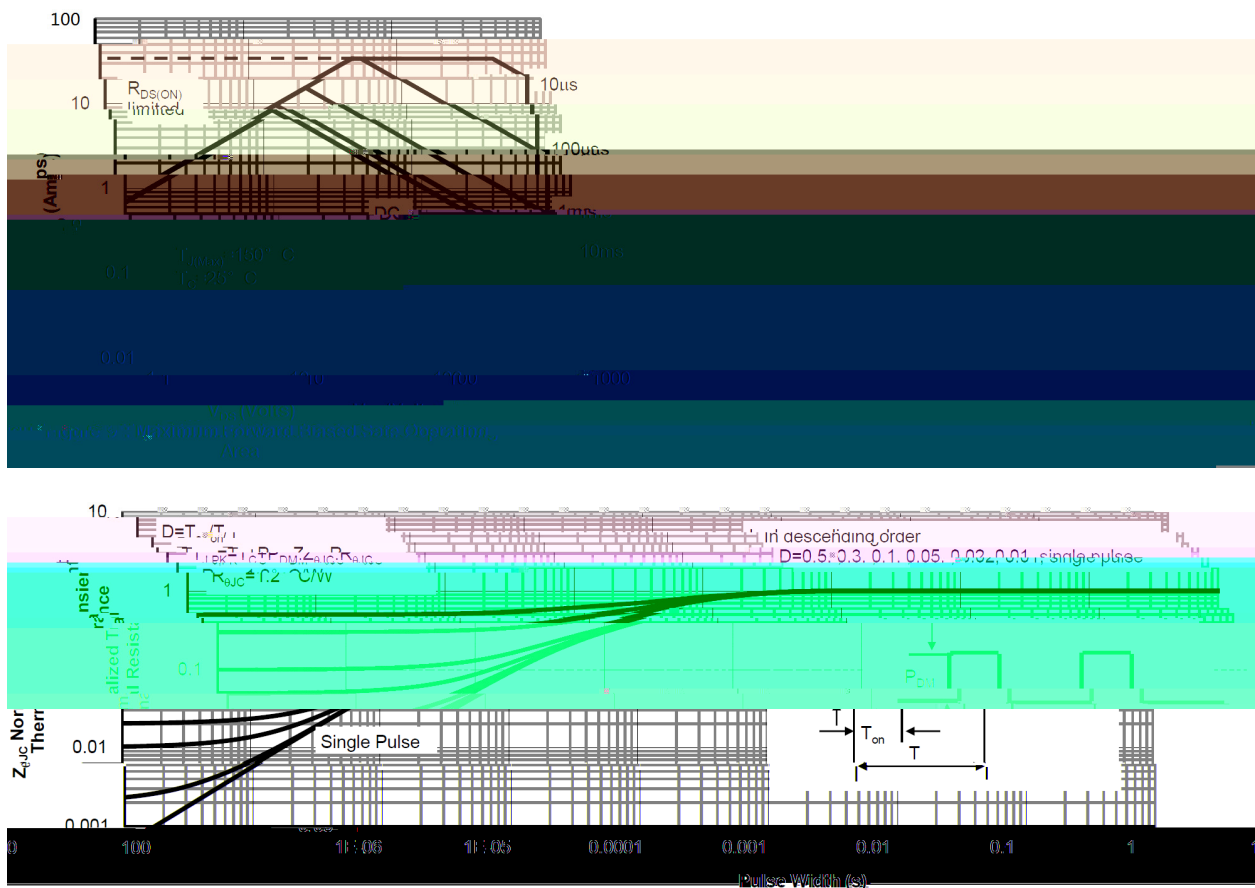
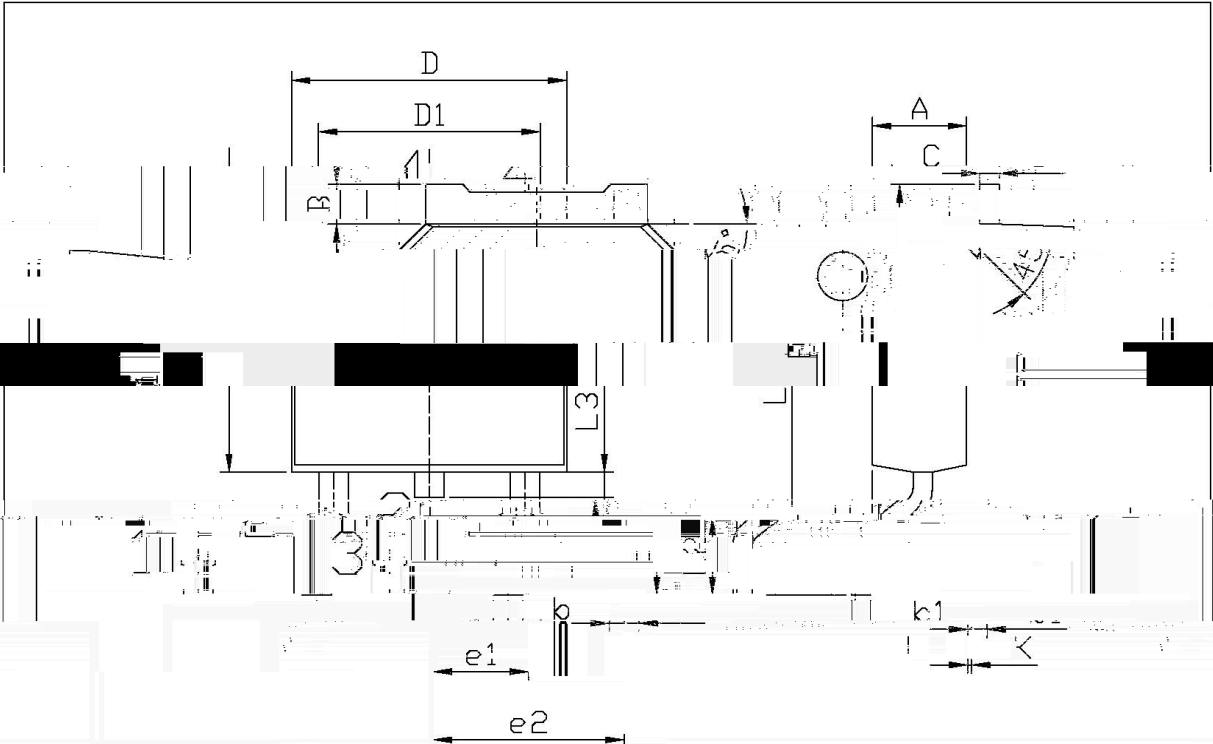


Figure 10: Normalized Maximum Transient Thermal Impedance

/ Package Dimensions



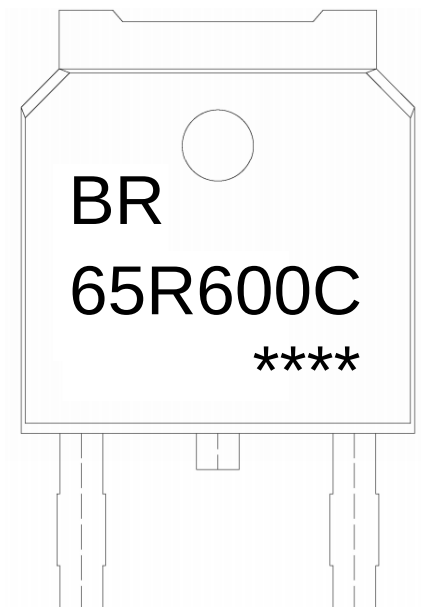
单位: mm

Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
A	6.25	7.20	B	2.20	2.40
C	2.24	2.34	D	0.95	1.25
D1	4.13	4.28	e1	0.70	0.84
L1	10.35	11.00	L2	0.45	0.55
L3	0.55	0.65	L3	7.00	7.50
L4	0.90	1.00	L4	6.75	7.00
L5	0.50	0.60	L5	5.00	5.50

TQ=252



/ Marking Instructions



BR

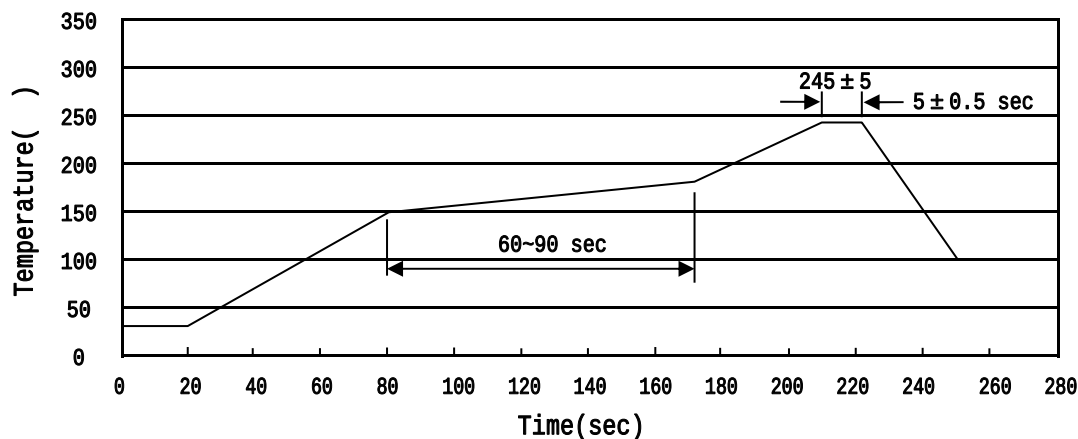
65R600C

Note:

BR: Company Code

65R600C: Product Type Code

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


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


Note:

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

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.
/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TO-252	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices