

/ Descriptions

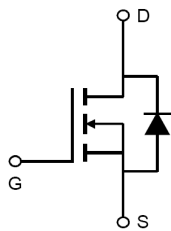
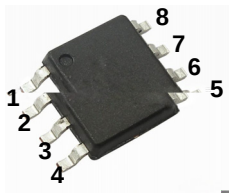
SOP-8 N MOS N-Channel in a SOP-8 Plastic Package.

/ Features

$R_{DS(on)}$ RoHS
 Low $R_{DS(on)}$, Low Gate Charge, Optimized for fast-switching, RoHS and Halogen-Free Compliant.

/ Applications

DC/DC AC/DC /
 Synchronous Rectification in DC/DC and AC/DC Converters, Isolated DC/DC Converters in Telecom and Industrial.

/ Equivalent Circuit**/ Pinning**

PIN1:S PIN 2:S PIN 3 S PIN 4 G
 PIN5 PIN 6 PIN 7 PIN 8:D

/ h_{FE} Classifications & Marking

See Marking Instructions.

BRCS4292SC

/ Electrical Characteristics(Ta=25 °C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	$V_{DS}=50V$ $V_{GS}=0V$ $f=1.0MHz$		1134		pF
Output Capacitance	C_{oss}			92		
Reverse Transfer Capacitance	C_{rss}			10.3		
Total Gate Charge(10V)	Q_g	$V_{DD}=50V$ $I_D=8A$ $V_{GS}=10V$		21		nC
Total Gate Charge(4.5V)				11		
Gate-Source Charge	Q_{gs}			3.1		
Gate-Drain Charge	Q_{gd}			5.1		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=50V$ $I_D=8A$ $R_G=3.0$		7.0		ns
Turn-On Rise Time	t_r			3.0		
Turn-Off Delay Time	$t_{d(off)}$			20		
Turn-Off Fall Time	t_f			3.0		
Body Diode Reverse Recovery Time	t_{rr}	$I_F=8A$ $di/dt=500A/\mu s$		20		ns
Body Diode Reverse Recovery Charge	Q_{rr}			90		nC

Notes:

A. The value of R_{JA} is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with $T_A=25^\circ C$. The value in any given application depends on the user's specific board design.

B. The power dissipation P_D is based on $T_{J(MAX)}=150^\circ C$, using $\leq 10s$ junction-to-ambient thermal resistance.

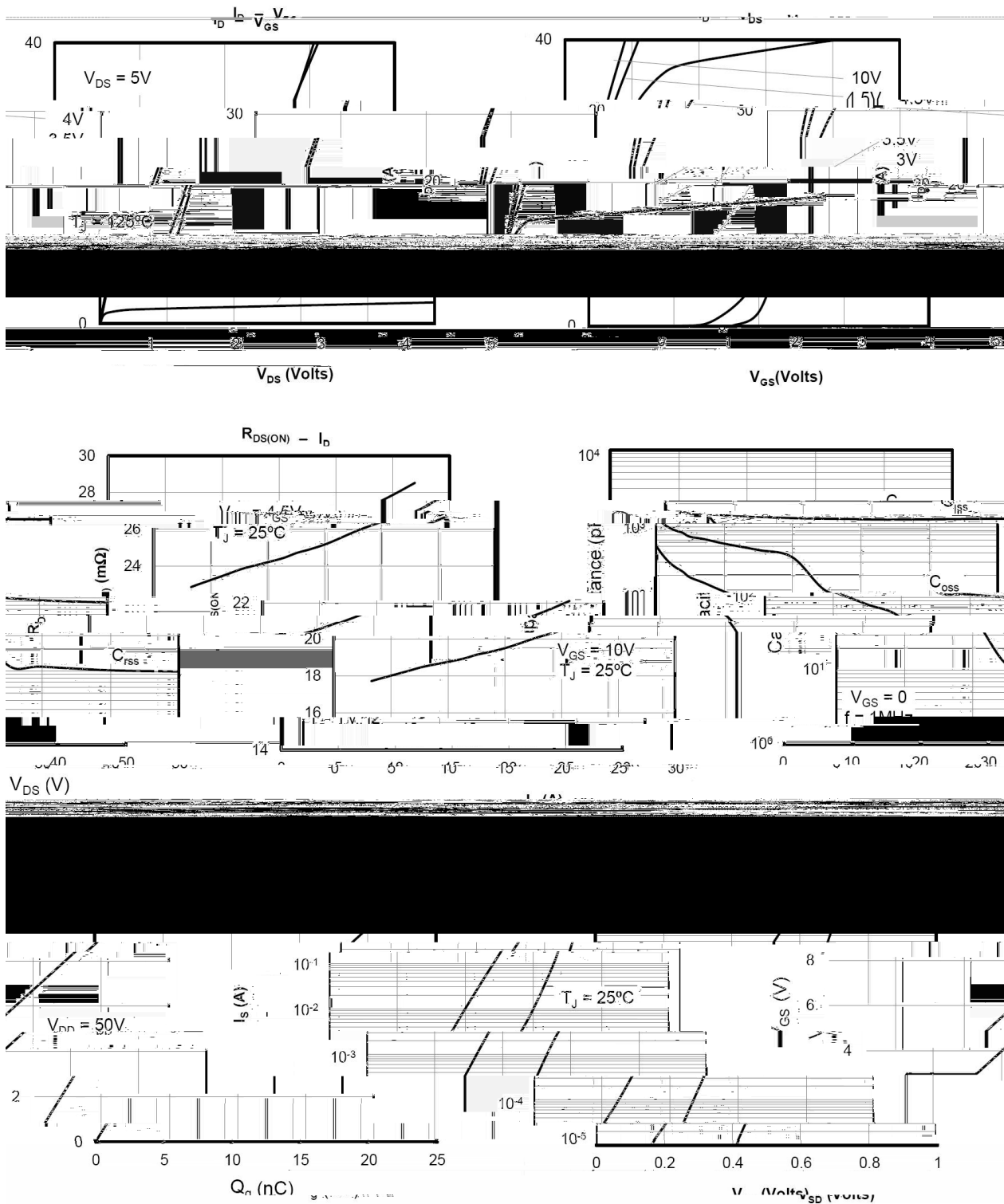
C. Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)}=150^\circ C$. Ratings are based on low frequency and duty cycles to keep initial $T_J=25^\circ C$.

D. The R_{JA} is the sum of the thermal impedance from junction to lead R_{JL} and lead to ambient.

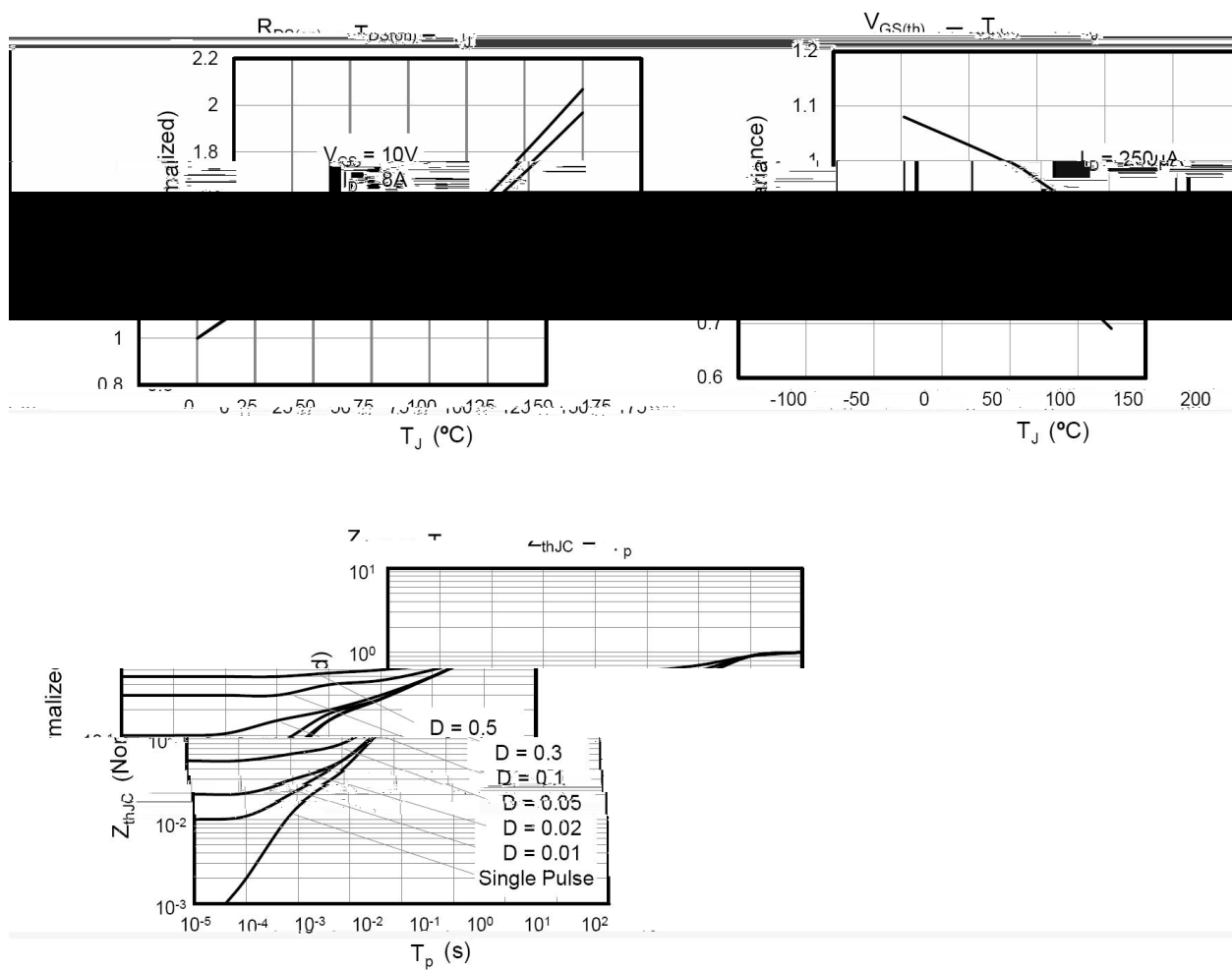
E. The static characteristics in Figures 1 to 6 are obtained using $<300\mu s$ pulses, duty cycle 0.5% max.

F. These curves are based on the junction-to-ambient thermal impedance which is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, assuming a maximum junction temperature of $T_{J(MAX)}=150^\circ C$. The SOA curve provides a single pulse rating.

I Electrical Characteristic Curve



I Electrical Characteristic Curve



/ Test Circuit & Waveform

Figure A: Gate Charge Test Circuit and Waveform

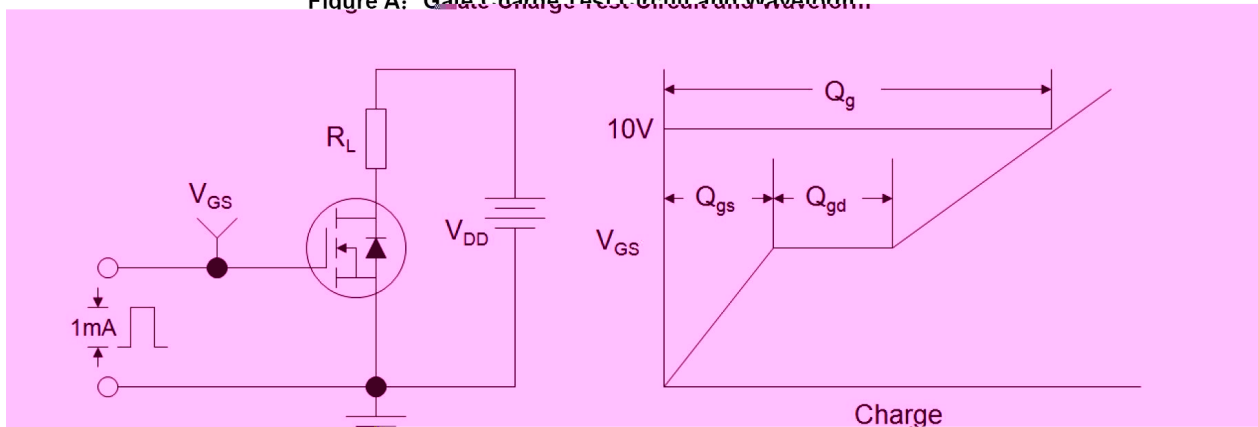


Figure B: Resistive Switching Test Circuit and Waveform

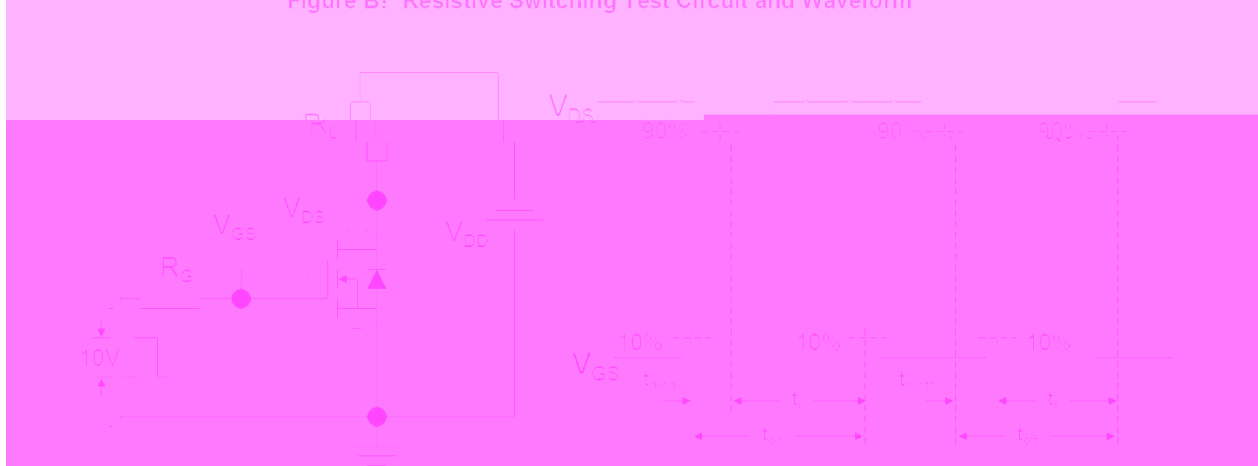
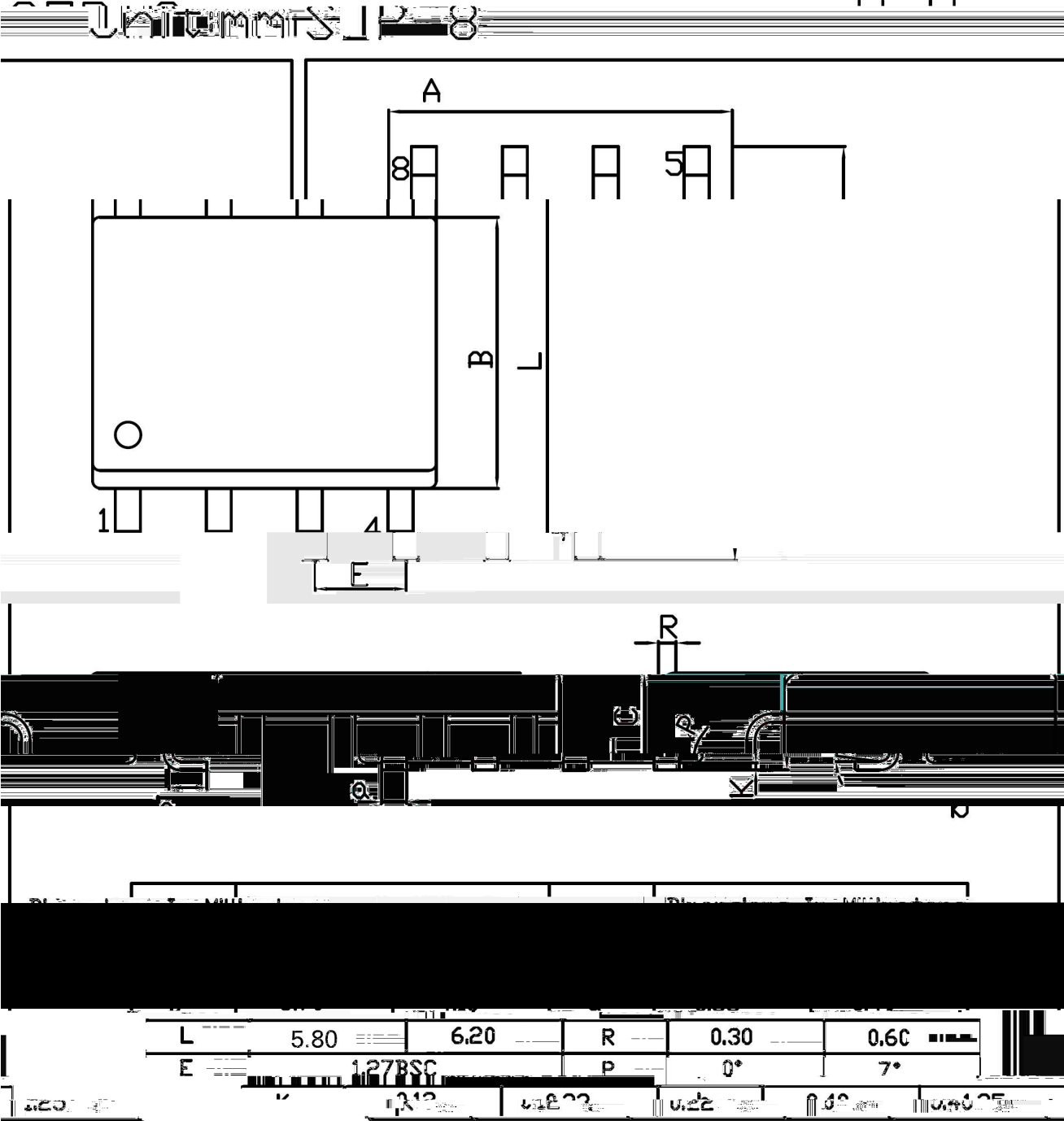


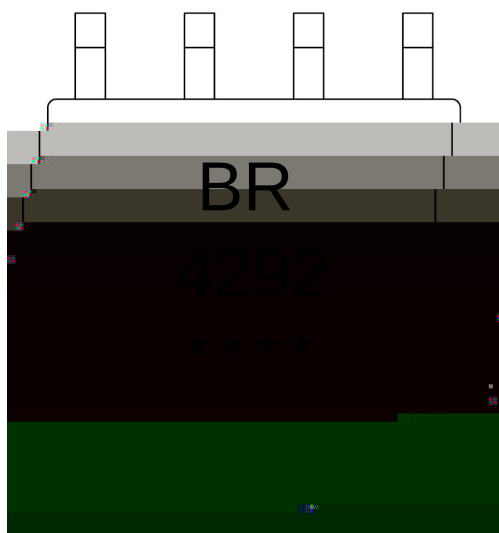
Figure C: Undamped Inductive Switching Test Circuit and Waveform



/ Package Dimensions



/ Marking Instructions



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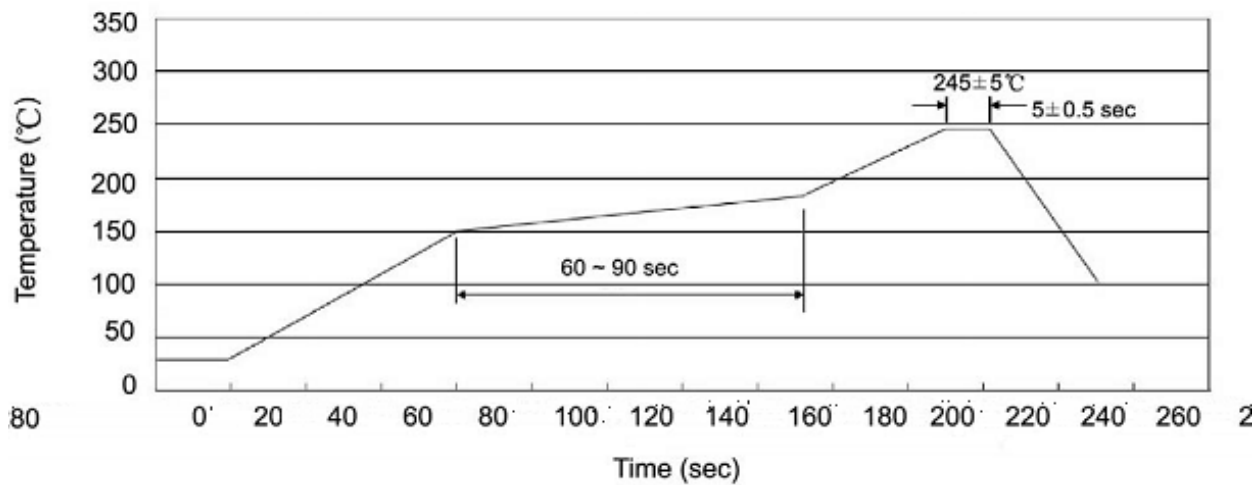
Note:

BR: Company Code.

4292 Product Type.

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

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Note:

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

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 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)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱

/ Notices