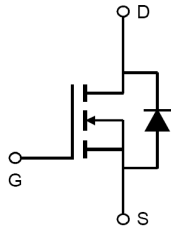
SOP-8 N MOS N-Channel MOSFET in a SOP-8 Plastic Package.

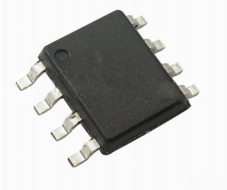
$R_{DS\ ON}$ RoHS

Low $R_{DS(ON)}$, Low Gate Charge, Optimized for fast-switching, RoHS .

DC/DC AC/DC /

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





PIN1:S PIN 2:S PIN 3 S PIN 4 G

PIN5 PIN 6 PIN 7 PIN 8:D

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	T_A=25	I_D	11.5	A
	T_A=70		9.0	A

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	V_{DS}=50V V_{GS}=0V f=1.0MHz		2420		pF
Output Capacitance	C_{oss}			170		
Reverse Transfer Capacitance	C_{rss}			11		
Gate resistance	R_g	f=1.0MHz	0.20	0.55	0.90	Ω
Total Gate Charge(10V)	Q_g	V_{DD}=10V I_D=11.5A V_{DS}=50V		33	50	nC
Total Gate Charge(4.5V)				15	25	
Gate-Source Charge	Q_{gs}			7.0		
Gate-Drain Charge	Q_{gd}			4.0		
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=10V V_{DS}=50V R_L=4.35 R_{GEN}=3.0		8.0		ns
Turn-On Rise Time	t_r			3.0		
Turn-Off Delay Time	$t_{d(off)}$			25		
Turn-Off Fall Time	t_f			4.0		
Body Diode Reverse Recovery Time	t_{rr}	I_F=11.5A dI/dt=500A/μs		25		ns
Body Diode Reverse Recovery Charge	Q_{rr}			110		nC

Notes:

A. The value of $R_{\theta JA}$ is measured with the device mounted on 1in2 FR-4 board with 2oz. Copper, in a still air environment with T_A =25°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°C, using 10s junction-to-ambient thermal resistance.

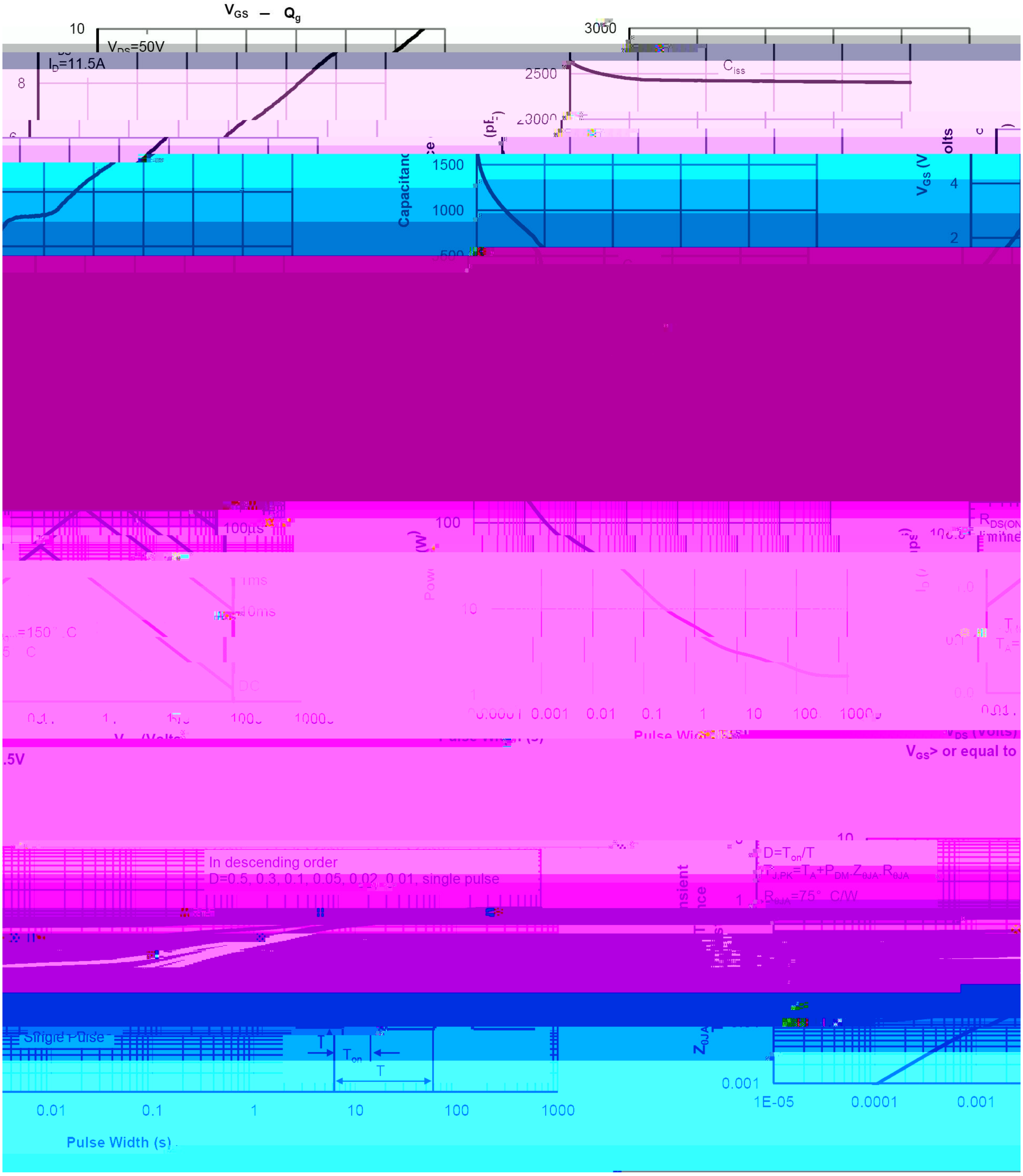
C. Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)}$=150°C. Ratings are based on low frequency and duty cycles to keep initial T_J=25°C.

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

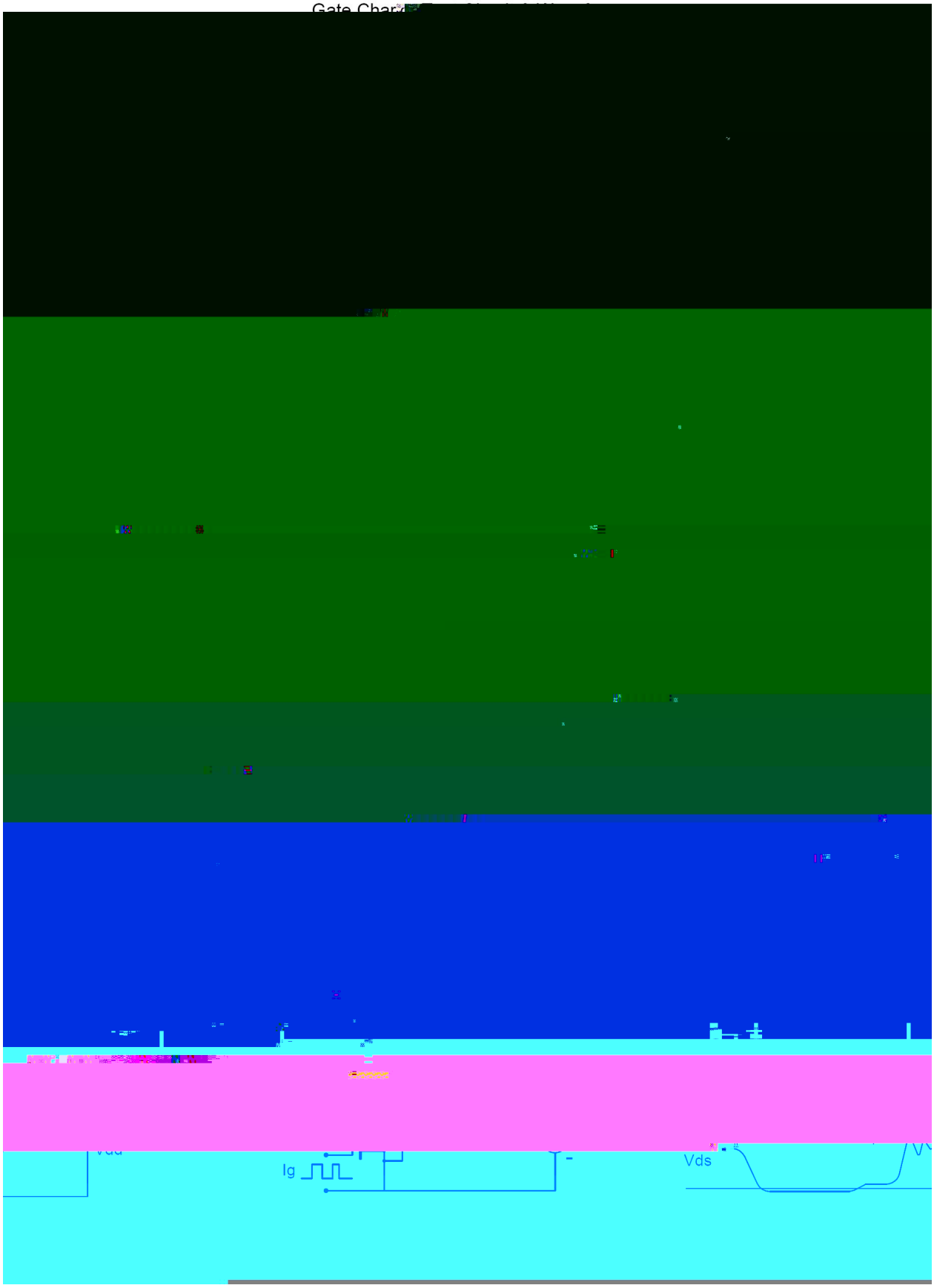
E. The static characteristics in Figures 1 to 6 are obtained using <300μs pulses, duty cycle 0.5% max.

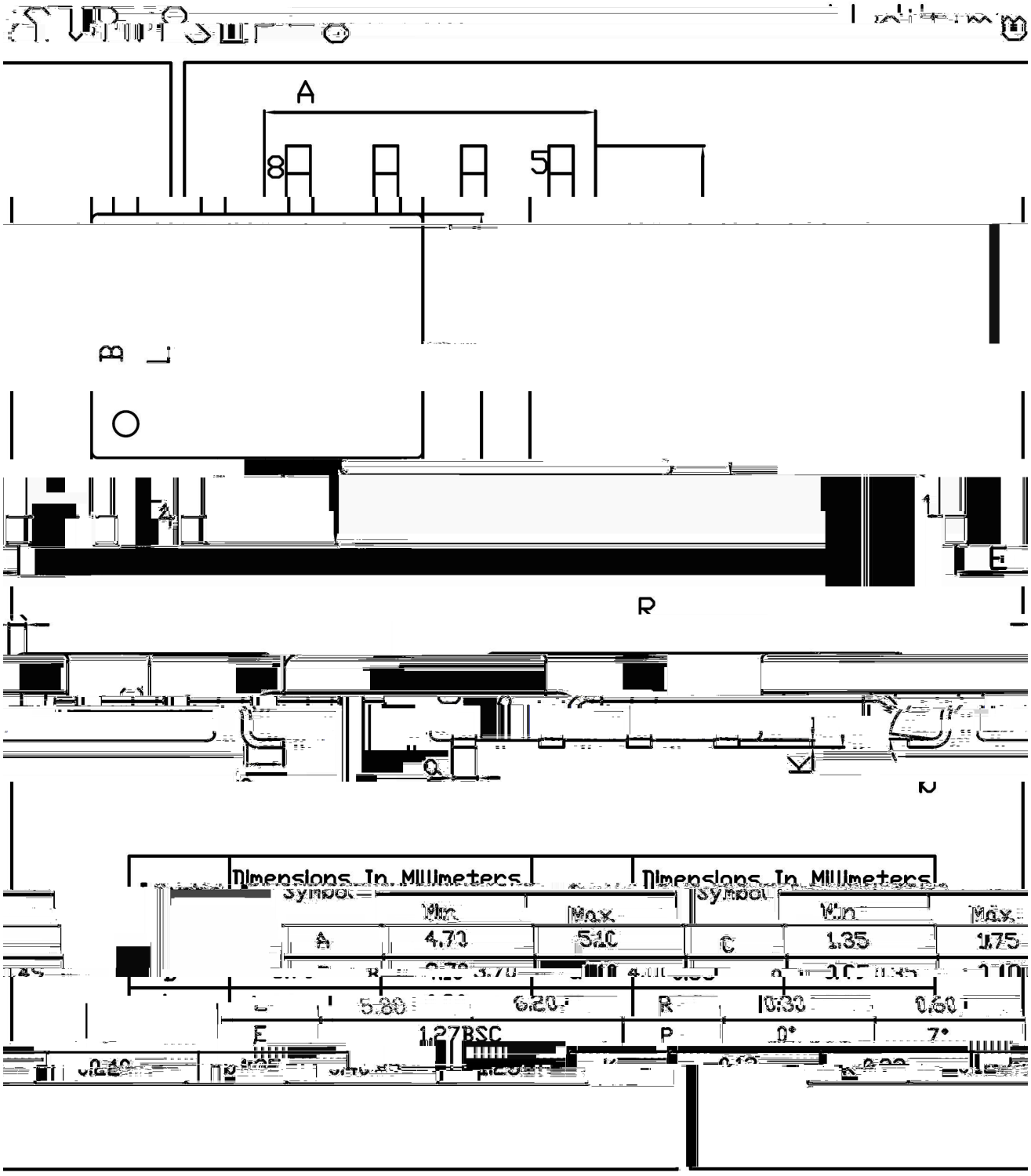
F. These curves are based on the junction-to-ambient thermal impedance which is measured with the device mounted on 1in2 FR-4 board with 2oz. Copper, assuming a maximum junction temperature of $T_{J(MAX)}$=150°C. The SOA curve provides a single pulse rating.

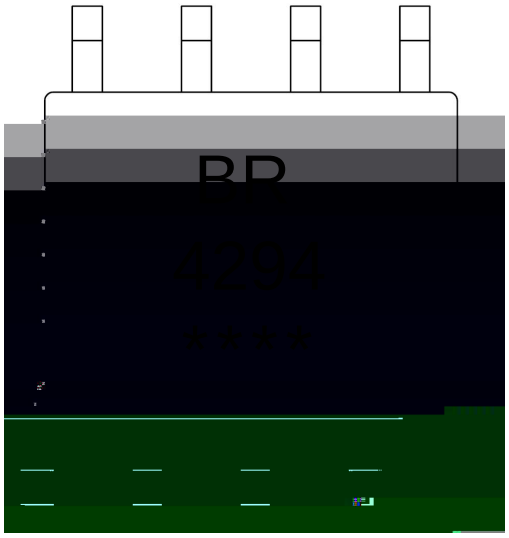

I_D – V_DS
100
90
80
10V
4.5V
4V
I_D – V_GS
100
V_DS=5V
80
Temperature (°C)
R_DS(ON) – V_GS
30
I_S – V_SD
1.0E+01
1.0E-04
1.0E-05
0.0
0.2
0.4
0.6
0.8
1.0
V_SD (Volts)
8
10
0
2
4
6
V_GS (Volt



V$_{GS}$ — Q$_g$
V$_{DS}$=50V
I$_D$=11.5A
C$_{iss}$
Capacitance (pF)
100µs
1ms
10ms
DC
Pulse Width (s)
R$_{DS(ON)}$
V$_{GS}$> or equal to
In descending order
D=0.5, 0.3, 0.1, 0.05, 0.02, 0.01, single pulse
Single Pulse
T$_{on}$
T
D=T$_{on}$/T
T$_{J,PK}$=T$_A$+P$_{DM}$.Z$_{θJA}$.R$_{θJA}$
R$_{θJA}$=75°C/W
Z$_{θJA}$


Vdd
Ig
Vds


A
B
R
Dimensions In Millimeters
Dimensions In Millimeters
Symbol
Min.
Max.
A
4.70
5.10
C
1.35
1.75
5.80
6.20
R
0.30
0.60
1.27BSC
0°
7°



BR

4294

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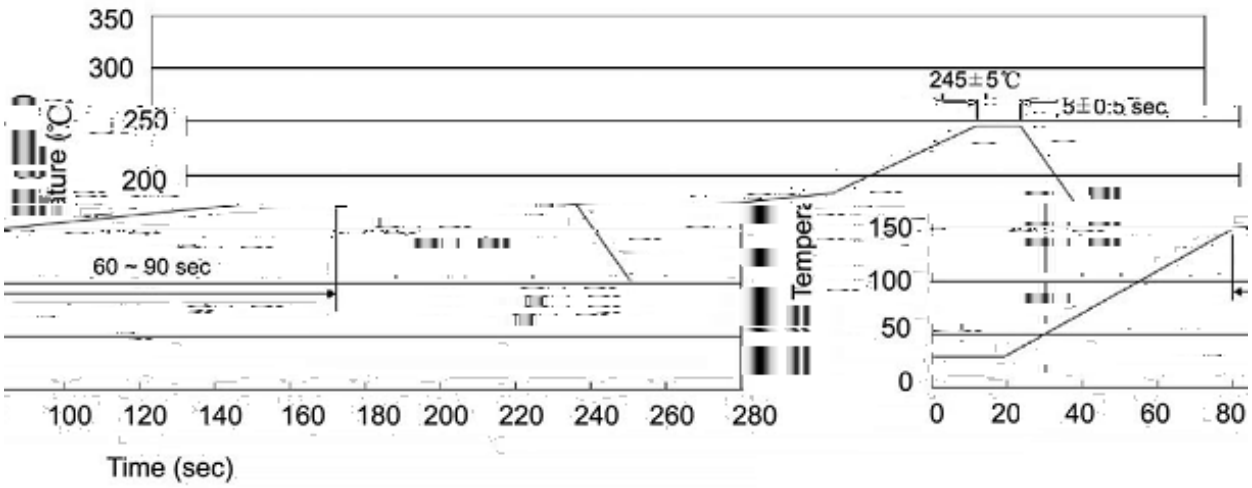
Note:

BR:	Company Code.
4294	Product Type.
****:	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 , 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.	

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

/ REEL

Package Type	Units					Dimension		(unit mm^3)