

/ Descriptions

SOP-8 N MOS

N-Channel Enhancement Mode Field Effect Transistor in a SOP-8 Plastic Package.

/ Features

$V_{DS}(V)=30V$ $I_D=6.9A$

$R_{DS(ON)} < 32m\Omega (V_{GS}=10V)$

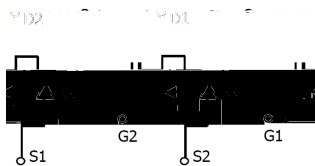
$R_{DS(ON)} < 36m\Omega (V_{GS}=4.5V)$

$R_{DS(ON)} < 52m\Omega (V_{GS}=2.5V)$

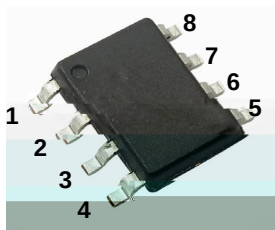
/ Applications

Power Management in Notebook computer, Portable Equipment and Battery powered systems and this device is suitable for use as a load switch or in PWM applications.

/ Equivalent Circuit



/ Pinning



PIN1	S2	PIN 2	G2	PIN 3	S1	PIN 4	G1
PIN 5	D1	PIN 6	D1	PIN 7	D2	PIN 8	D2

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25 °C)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current ^A	$I_D (T_a=25^\circ\text{C})$	6.9	A
	$I_D (T_a=70^\circ\text{C})$	5.8	A
Pulsed Drain Current ^B	I_{DM}	40	A
Power Dissipation for Single Operation ^A	$P_D (T_a=25^\circ\text{C})$	2.0	W
	$P_D (T_a=70^\circ\text{C})$	1.44	W
Junction and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	
Thermal Resistance-Junction to Ambient ^A	$R_{\theta JA} \quad t \leq 10s$	62.5	/W
	$R_{\theta JA}$	110	/W
Maximum Junction-to-Lead ^C	$R_{\theta JL}$	40	/W

Note:

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 $T_A=25^\circ\text{C}$. The value in any a given application depends on the user's specific board design. The current rating is based on the $t \leq 10s$ thermal resistance rating.

B: Repetitive rating, pulse width limited by junction temperature.

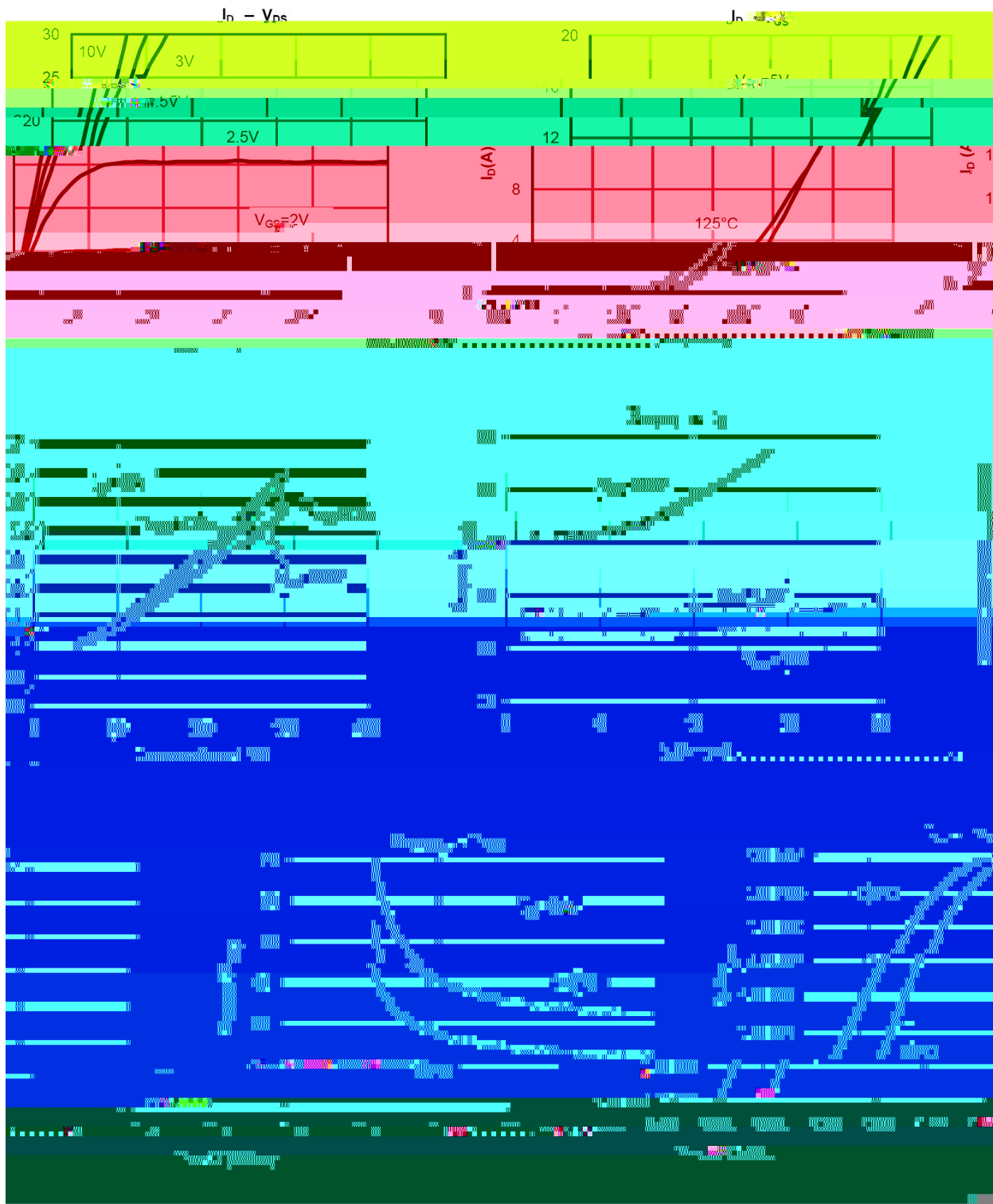
C. The $R_{\theta JA}$ is the sum of the thermal impedance from junction to lead $R_{\theta JL}$ and lead to ambient.

D. The static characteristics in Figures 1 to 6 are obtained using 80 μs pulses, duty cycle 0.5% max.

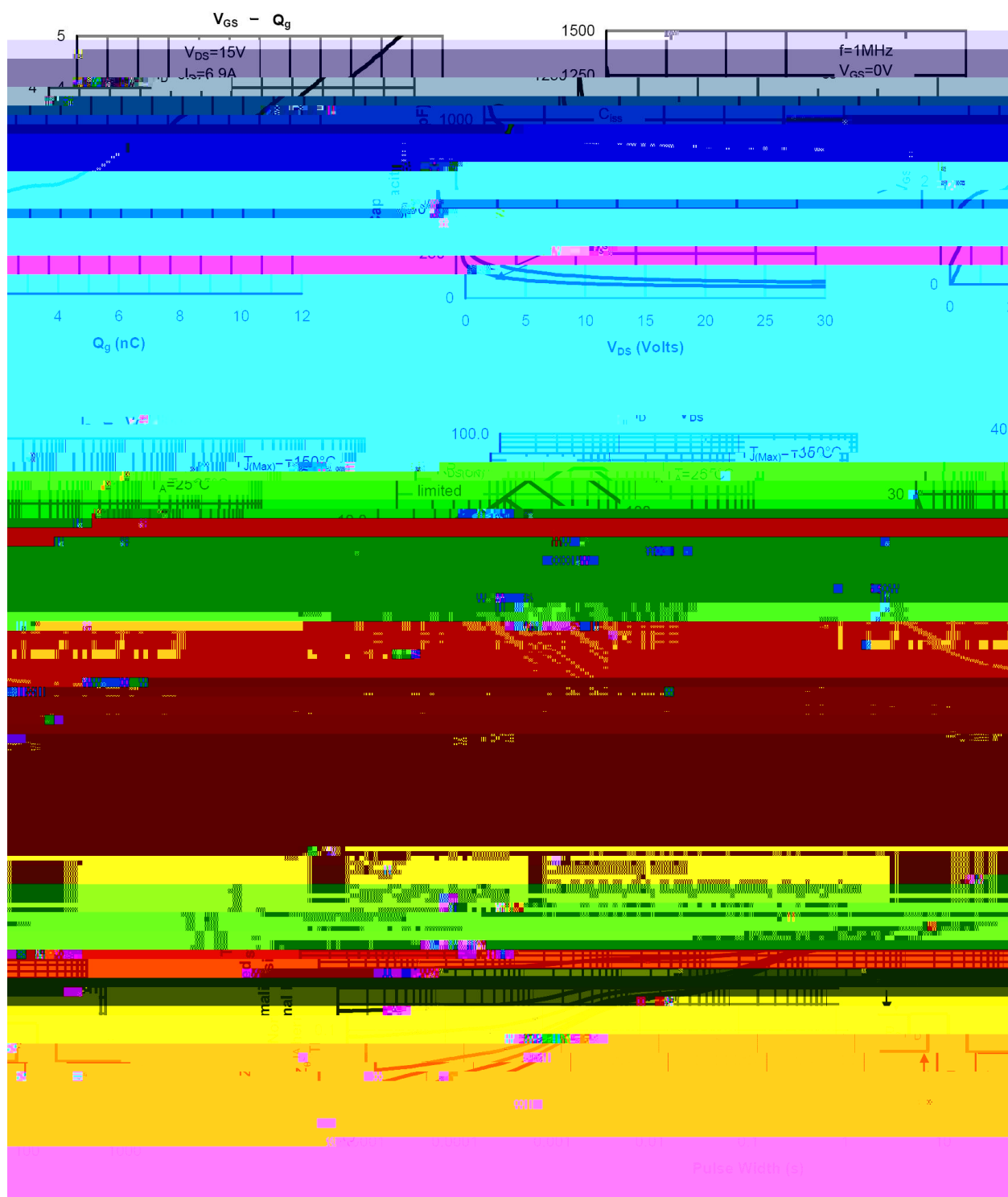
E. These tests are performed with the device mounted on 1 in² FR-4 board with 2oz. Copper, in a still air environment with $T_A=25^\circ\text{C}$. The SOA curve provides a single pulse rating.

BRCS4800SC
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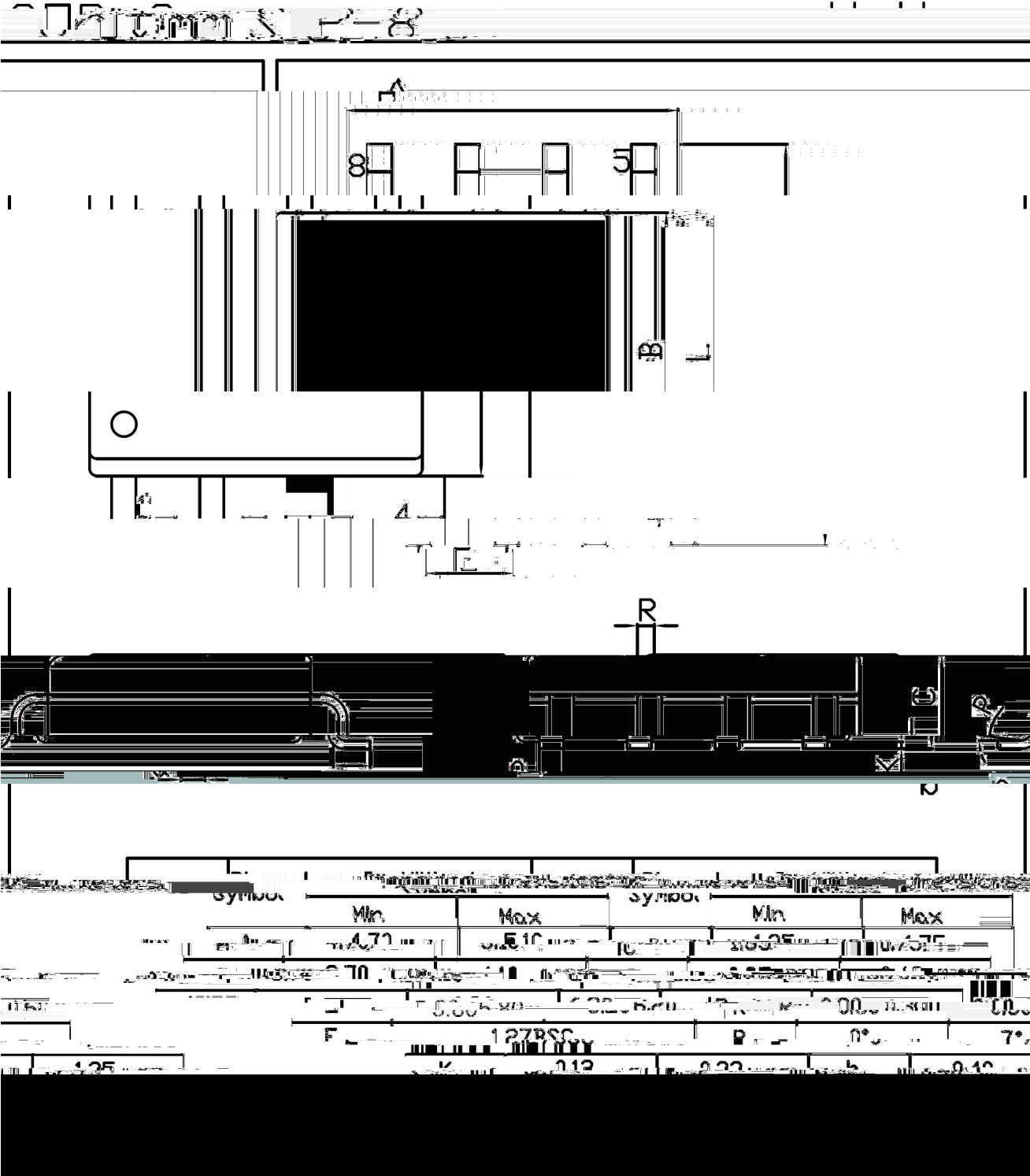
/ Electrical Characteristic Curve



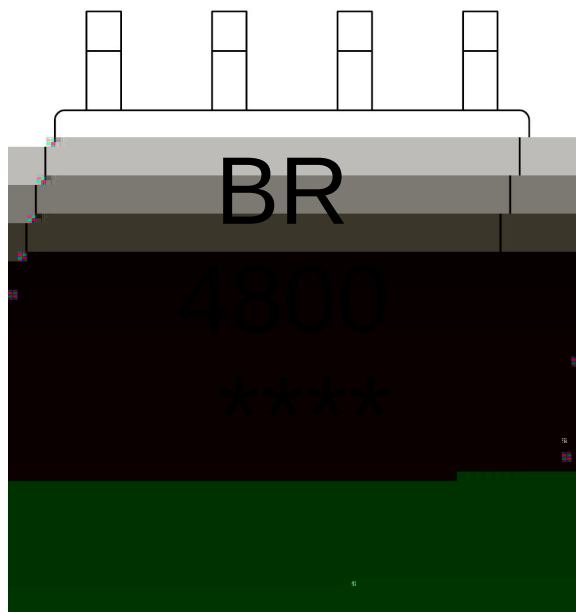
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



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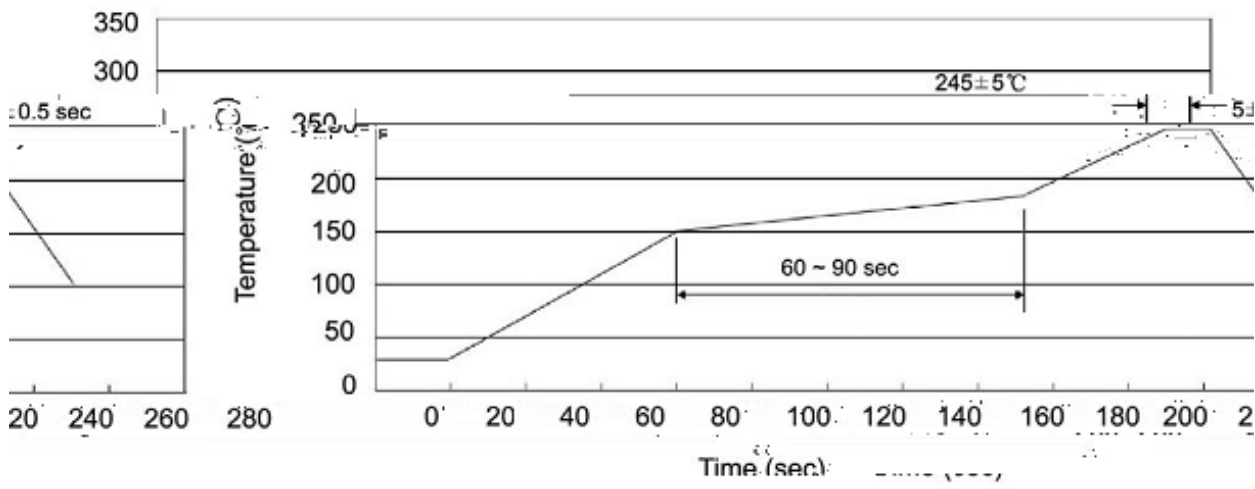
Note:

BR: Company Code.

4800: 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. |

/ 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
SOP/ESOP-8	4,000	2	8,000	6	48,000	13 ×12	360×360×50	380×335×366

/ Notices