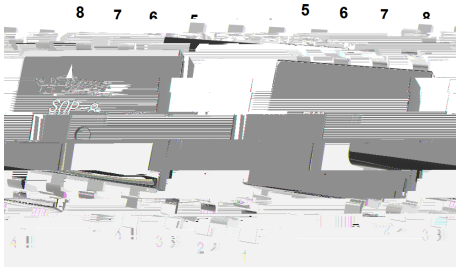
VRS0; ṂṂ Ⱡ ᴥ Q ॐ PRV ʃ ѽ Ẕ ᄀ
Grxe0h Q0FKDQQH0 PRVIHW Iq d VRS0; S0dvwlf Sdfndjh1

V_{DS}(V)=30V I_D=12.3A
$R_{DS(ON)}$@10V<12mΩ(Typ. 8.7mΩ)
$R_{DS(ON)}$@4.5V<20mΩ(Typ. 11.5mΩ)
ヽ ᵀ DHF0T434 ‰ ´ ᵪ ᴵ ، ό ι ∂ ι ή ꜰ β Qualified to AEC-Q101 Standards for High Reliability, HF Product.

ᵮ PE2QE2XPSF2YJD ⊞ᵪ ᶩ ق ڏ ᴮ ª ℓ ∪ Я ჯ Ώ ʰ / ǐ ⊿ GF0GF Ɔ ㄒ ᛋ ∧ /ق U Â Ꮒ ι ◗ ’ ∩ ჯ Ẕ ŧ ⊞Ⱶ ι ∂
Klj k Iuhtxhqf| SrIqw0ri0Ordg V|qfkurqrxv Exfn Frqyhuwhu iru PE2QE2XPSF2YJD/ Qhwzrunlqj GF0GF Srzhu V|vwhp/0rdg VzIwfk, Meet the stringent requirements of automotive applications.



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

/ Absolute Maximum Ratings(Ta=25)

v ̈Ω Parameter	ϒ N Symbol	̈Ω Ö Rating	D Ч Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	12.3	A
Pulsed Drain Current	I_{DM}	46.5	A
Power Dissipation	P_D	3	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150	
Maximum Junction-to-Ambient	$R_{\theta JA}$(Steady-State)	41.7	/W

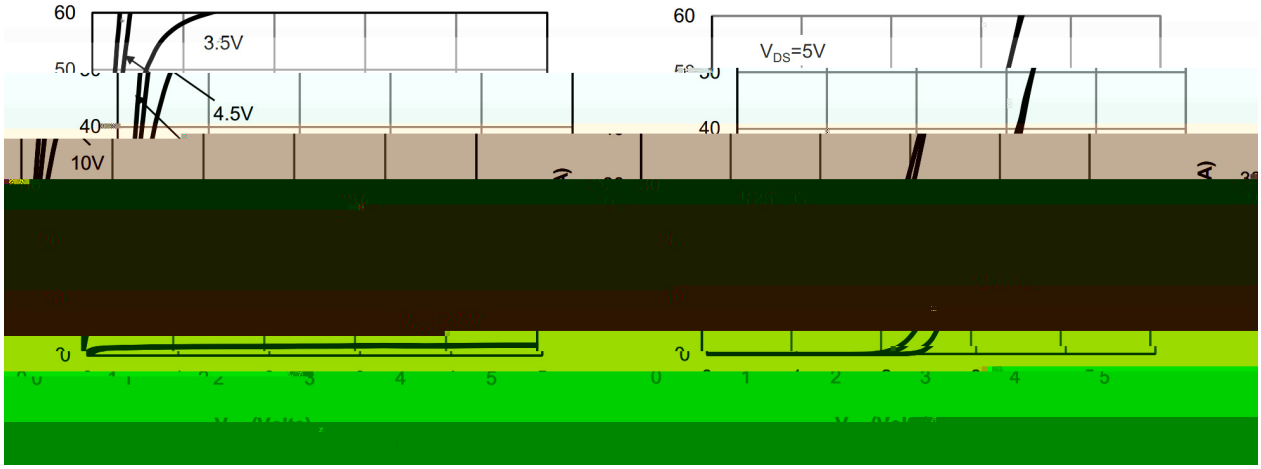
/ Electrical Characteristics(Ta=25)

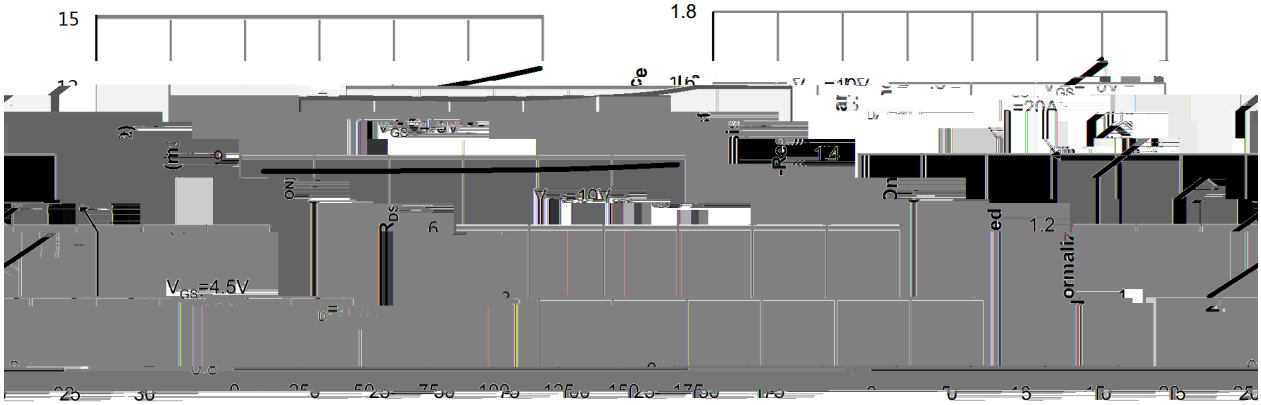
v ̈Ω Parameter	ϒ N Symbol	⊥ ;ˆ ţ Test Conditions	ω ņ Ö Min	Ɛ ʒ Ö Typ	ω ² Ö Max	D Ч Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	30	36.5		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V V_{GS}=0V			1	μA
Gate-Body leakage current	I_{GSS}	V_{GS}=±20V V_{DS}=0V			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	1.0	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=20A		8.7	12	mΩ
		V_{GS}=4.5V I_D=10A		11.5	20	mΩ
Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=1.0A			1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		1200		pF
Output Capacitance	C_{oss}			125		pF
Reverse Transfer Capacitance	C_{rss}			100		pF
Gate resistance	R_g	V_{DS}=0V V_{GS}=0V f=1.0MHz		3.7		Ƒ
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V V_{DS}=15V I_D=20A		40		nC
Total Gate Charge	$Q_{g(4.5V)}$			22		nC
Gate-Source Charge	Q_{gs}			11		nC
Gate-Drain Charge	Q_{gd}			5		nC

/ Electrical Characteristics(Ta=25)

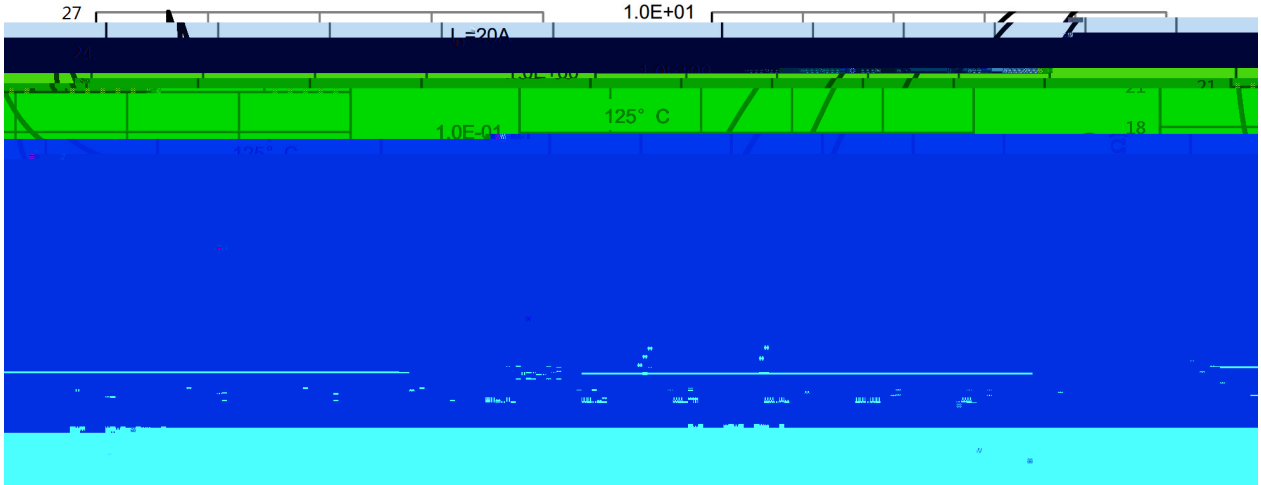
v Ѭ Parameter	٧ N Symbol	╨ ⁝ ┆ Ţ Test Conditions	ѡ ṇ Ө Min	Ɛ ʒ Ө Typ	ѡ ᶻ Ө Max	ᴅ Ꮋ Unit
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=15 V V_{GS}=10V R_L=0.75Ω R_{GEN}=3Ω		11		ns
Turn-On Rise Time	t_r			14		ns
Turn-Off Delay Time	$t_{d(off)}$			38		ns
Turn-Off Fall Time	t_f			10		ns

/ Electrical Characteristic Curve

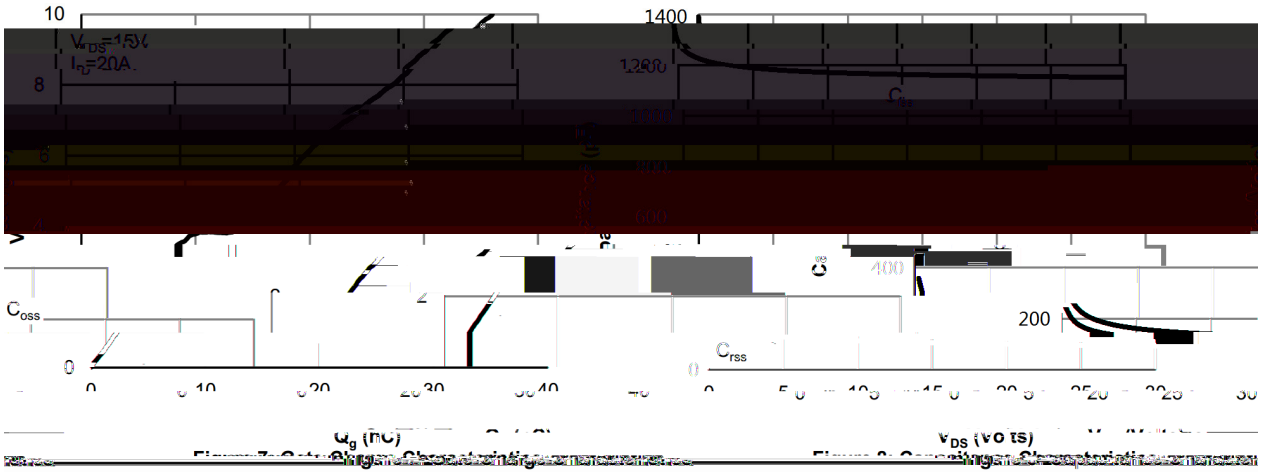


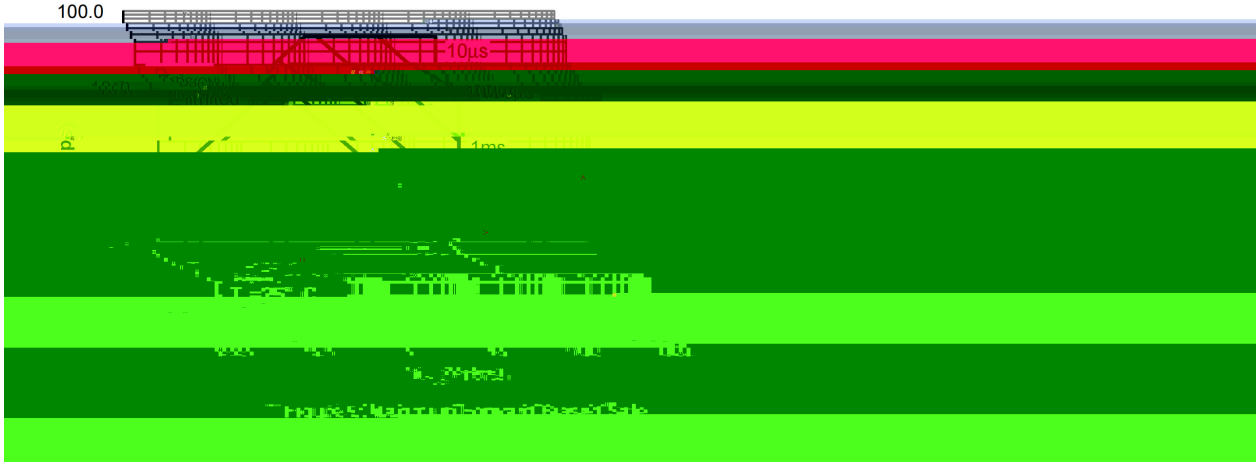


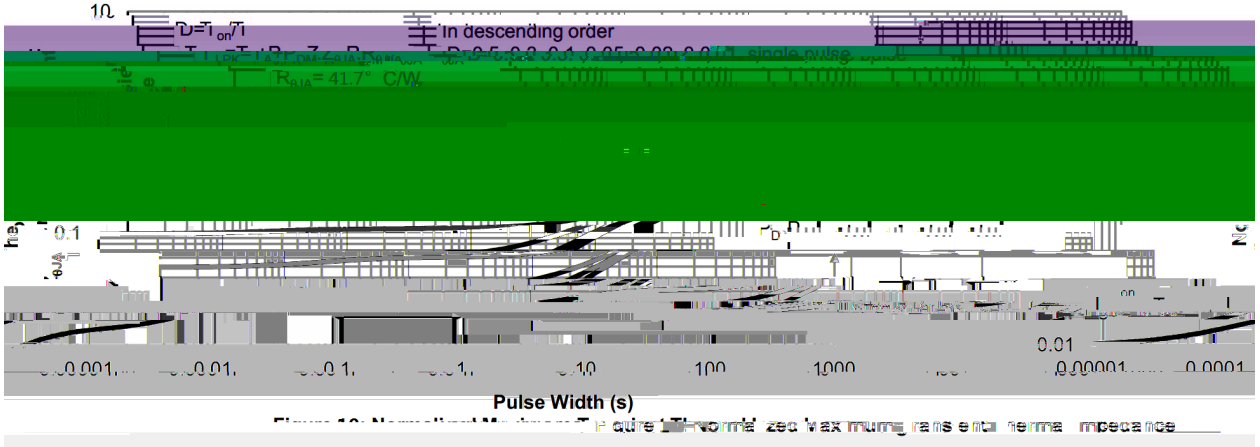
Voltage



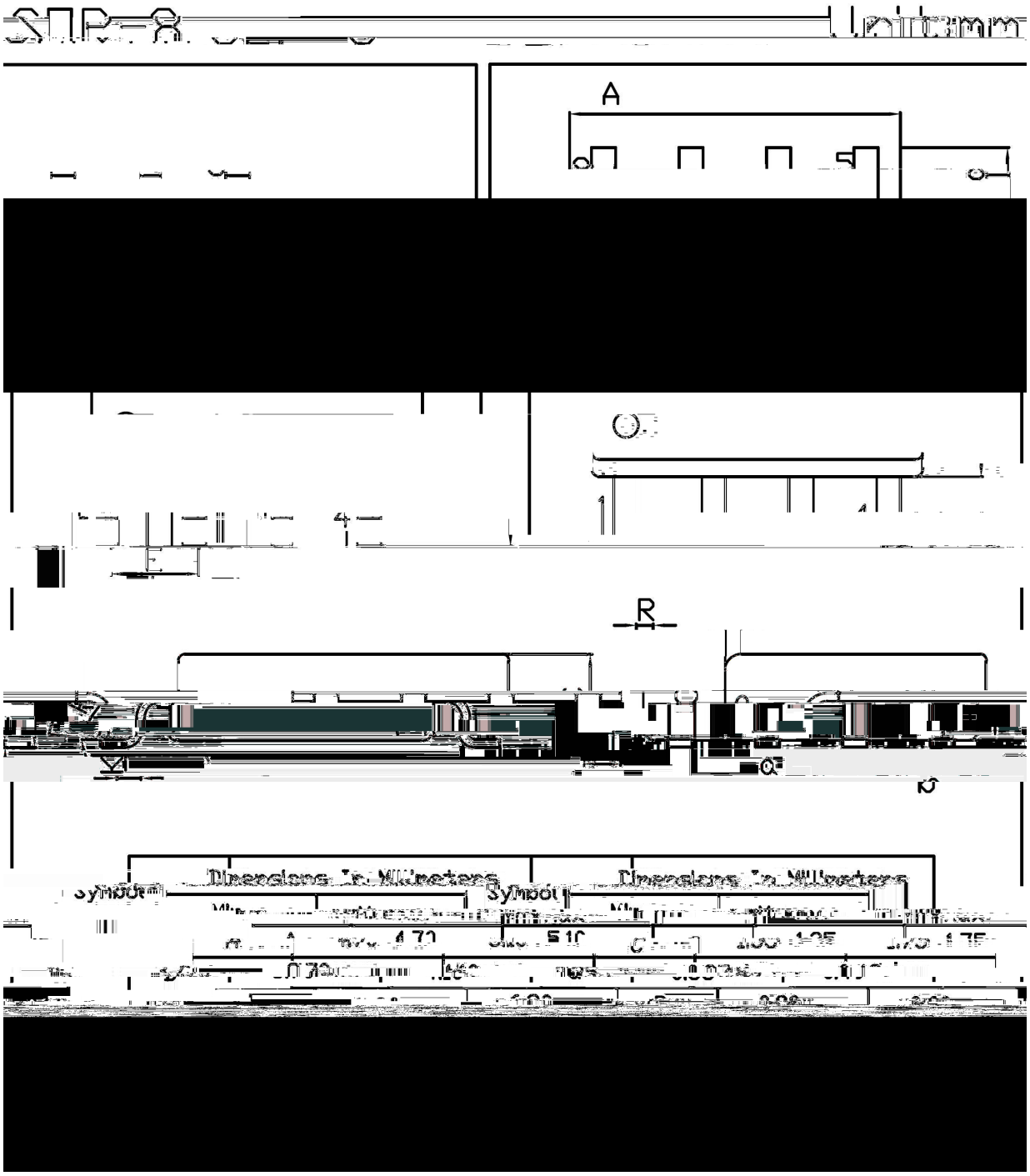
/ Electrical Characteristic Curve



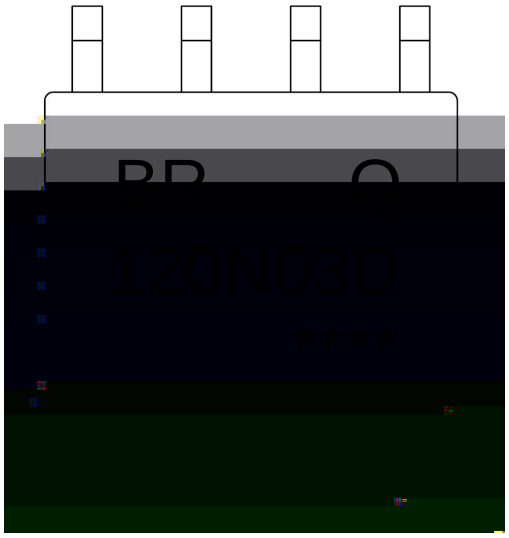




/ Package Dimensions



/ Marking Instructions



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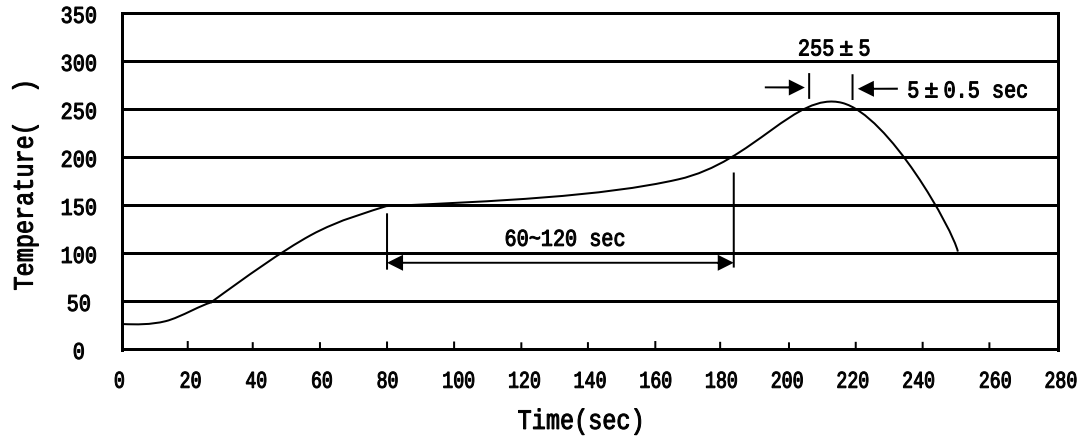
BR χ	ѭ ϗ ͷ Ղ
Q χ	ѭ ∩ ϩ ή ɾ β ‰ ϔ
120N03D χ	ѭ ϳ ᴺ Ղ
**** χ	ѭ ι ɾ ή ᴺ Ղ ι ϕ ι ɾ ή ᴺ Ψ ק

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
120N03D:	Product Type Code
****:	Lot No. Code, code change with Lot No

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



ب ˝ χ

1 Ĺ ♬ □ ỷ 150 Ḱ 200 ɬ ı `H ڑ 60 Ḱ 120sec;

2 Š Ë □ ỷ 255 ° 5 ɬ ı `H ڑ 'Y ﾊ ㎞ 5 ° 0.5sec;

3 ì ˙ ﾘ ˛ ↄ ♨ ỷ ㎞ 2 Ḱ 10 ɬ /sec.

Note:

1.Preheating:150~200 ɬ , Time:60~120sec.

2.Peak Temp.:255 ° 5 ɬ , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ɬ /sec.

/ Resistance to Soldering Heat Test Conditions

□ ỷ χ 260 ° 5 ɬ `H ڑ χ 10 ° 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

ↄ ` ﾔ Ł / REEL

Package Type	Units					Dimension		(unit mm³)
	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