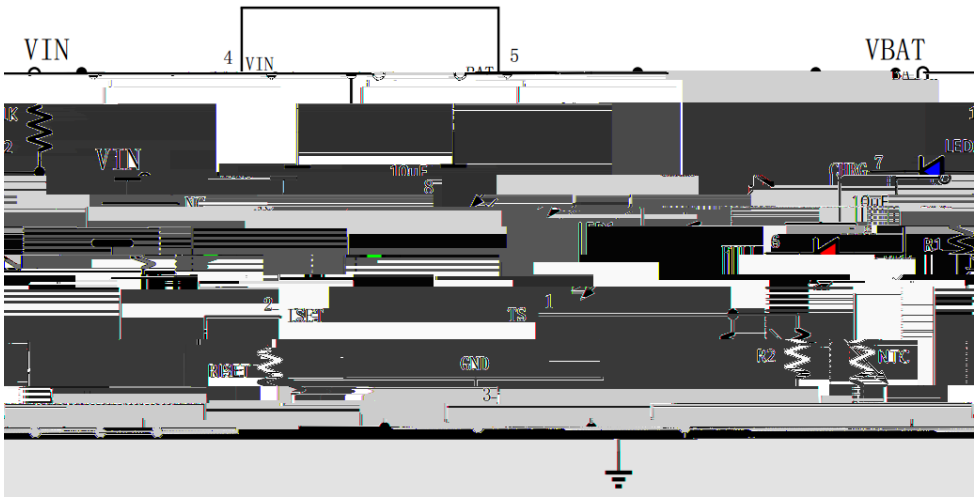
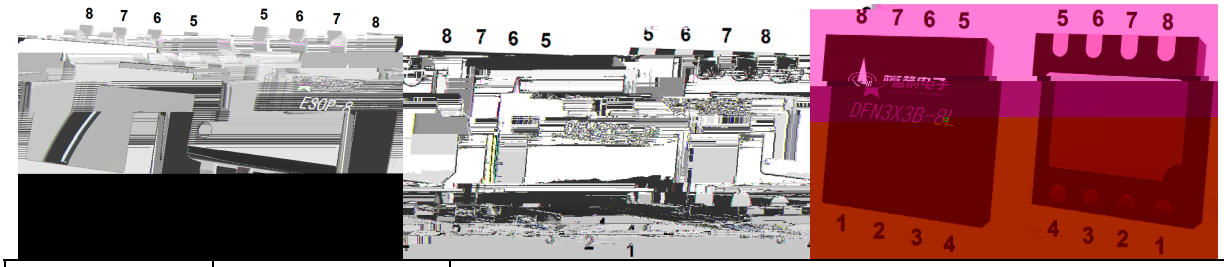
BRCL4058H SREIES ĩ ₵ ڱ ɾ̂ ̂ ̂ ̂ ɒ ` ɔ – ⿰Ḣ ̃Ǫ ở ╙/ở я ɬ ớ Ӿ ɔ ʜ ℧ ˧ ˚ ⿰Ṃ Ɛ ⁼ ʒ Ṉ ⿰ʊ ʋ ɬ ɬ ̈Ǫ ̨ ÆBRCL4058H SREIES ˚ Ẃ ڱ ᵀ ӝ ̈Ạ Ã Ẓ ɬ ̆ ɬ ̆ ʃ ɬMOSFET ˝ ‗ ʒ گ й ɔ ث ı ̈A Ɋ j ɹ ʅ ʋ ɬ ₅ ╜ ɔ ڳ ⁼ ڭ ̃ ‿ ‖ ˥ ♬ ɾ ɪ ı Ḿ Ӿ ɔ ɔ ╙ ڤ Φ ذ ` ӝ ɒ ʑ ı ' ̈Ḥ Ă ɑ̃ ɔ ☐ ע





PIN Num.	Symbol	Function
1	TS	□ ẙ ₅ ╨ ƶ ʔ ʅ ɪ j Æ ɫ ̀H ⅃ ì ş
2	LVHW	Ӿ ɔ ɔ ╙ ⅄ ⅄ ڼ ڼ Ṅ 4 (OBJ ɔ ڳ ʰ ε ULVHW ζ ف ì ˙ ş ↱ ⅄ ⅄ Ӿ ɔ ɔ ╙ LEDW@4:33-YLVHW2ULVHW
3	GND	ϟ ɑ ş
4	VIN	ɔ ◊ ƶ ʔ Ậ ǖ ɪ ف ì ˙ ڳ ʰ
5	BAT	Ӿ ɔ ɔ ╙ ƶ ̧ Ậ ǖ
6	FULL	Ầ ◖ ƶ ̧ OBJ Ӿ ɔ Ḣ ǎ ˝Y˜ ʅ
7	CHRG	Ầ ◖ ƶ ̧ OBJ Ӿ ɔ ↑ ỗ ˝Y˜ ʅ
8	NC	Ừ ʅ

/ Part Name

BRCL4058H : ˙	
⅄ N	ὼ ڭ

Ṃ ŁΠ ɪ SE:ESOP-8 ɪ ZZ:

PARAMETER

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
		R_{ISET}=17k, Constant Current Mode		100		mA
		R_{ISET}=3.4k, Constant Current Mode		500		mA
		R_{ISET}=1.7k, Constant Current Mode (ESOP-8 & DFN3×3B-8L)		1000		mA
BAT Pin Current	I_{BAT}	R_{ISET}=2.1k, Constant Current Mode =1.7k, 03 0042×6(1(2-8277 4B-)77 4B(8)t Mod) 4.600	500	mA	5732.7259.88	868

/ Principle block diagram



/ Function description

Ę ڑ ϿɔЯ Ⱨ 3.3V ǎ ƛ 6.5V ̀H ı ϒ ɔ ʜ IC Ṅ₅ ʊ ̃ ŧ þ ' BAT Â ő ɔ Я Ⱨ 2.6V ı ˛ ϒ ɔ ̀H ƀ Ɑ ⱡ ╚ ϒ ɔ ₩ Ã ƍ ف ヿ ₩ Ã ï ı BRCL4058H SREIES ώ ě ﾒ 1/10 ISET ﾒ ヽ ϒ ɔ ɔ ╚ ı Æ ɔ – ɔ Я ڑ ˙ ϿɔЯ ╚ ϒ ɔ Ğ ϿɔЯ ↨ Ẉ Ę BAT Â ő ɔ Я i ″ ˙ 2.6V Ꝋ i ̀H ı ϒ ɔ ʜ ف Ͽɔ ở ╚ ₩ Ã ε CC ζ ı ISET ﾒ ヽ ϒ ɔ ɔ ╚ ą ώ ě ﾒ ɔ – Ę BAT Â ő ɔ Я ì ẹ ѡ ﾒ ╢ ʊ ɔ Я ̀H ı BRCL4058H SREIES ف Ͽɔ ở Я ₩ Ã ε CV ζ ı ϒ ɔ ɔ ╚ Ự ▒ ں Ⱨ ı Ę CV ₩ Ã ï ϒ ɔ ɔ ╚ ں Ⱨ ˙ ﾒ ヽ ɔ ╚ 1/10 ̀H ı ɔ – ϒ ◗ ↑ õ ″ Y ˜

Ę ϒ ɔ ɔ ╚ ƍ ڑ ˙ ѡ ﾒ ╢ ϒ ɔ Я ª ں ϕ ħ Ö 1/10 ̀H ı ϒ ɔ Ỉ ע ą ﾒ Ƀ Ỉ ˆ ţ ĩ ن ص پ ヮ Ⱥ Л ф ▾ └ ⅝ ע ʜ Ḿ ISET Ậ ő ف Φ ˘ í ˆ ₅ ╨ Ę ISET Ậ ő ɔ Я ں ₆ 100mV Ꝋ ï ̀H ڑ ʌ ص t_{TERM} ε ˘ ㎳ 1ms ζ ̀H ı ϒ ɔ ą ﾒ Ƀ

ISET

ϒ ɔ ɔ ╚ ĩ پ ヮ Ⱥ ف ì ƍ ISET Ậ ő ﾚ ъ ş ɵ ڑ ɔ گ ϕ ħ ϕ ħ ɔ گ ⁼ ϒ ɔ ɔ ╚ پ ヮ ï ˚ ʒ Ã ˆ ɯ ﾒ (VISET=1V)

$$I_{BAT} = \frac{1700 \times V_{ISET}}{R_{ISET}}$$

ñ ϒ ɔ Ỉ ע ą ﾒ Ƀ ı BRCL4058H SREIES Ḿ BAT Â ő i ɔ Я ف Φ ف ﾒ ˘ í Ę ɔ – ɔ Я ں ₆ 4.05V ε ₇ Ḿ Ẓ ɔ – ķ ˛ 80% ₆ 90% ζ Ꝋ ï ̀H ı ϒ ɔ Ỉ ע ụ Ⱥ Ầ Ḋ ف ʒ ˜ ɔ – ą ﾒ ̀Y ƍ ε ă ì ẹ ζ Ⱥ ◗ ϒ ɔ ↑ õ ı Ẋ d ̃ ف Φ ˇ Ω ό ϒ ɔ Ỉ ע ᵏ ʊ ₄ ₗ

UVLO

Л ⅃ ⱡ Я ъ ჭ ɔ ت Ḿ ڑ Ͽɔ Я ف Φ ˘ í ı Ẋ ƍ VIN ″ ₆ Я ъ ჭ ъ ں Ꝋ i ɵ ˙ Æ ϒ ɔ ʜ Ȝ ̀Y ƍ ȳ ₩ Ã UVLO ɔ ت Ṅ Æ ϒ ɔ ʜ Ȝ ̀Y ƍ ȳ ₩ Ã þ ' UVLO ⅝ ע ʜ ʌ ﾄ ﾋ Ψ ı ˛ ƍ VIN ″ ₆ ⅝ ɔ – ɔ Я ㅊ 110mV ɵ ˙ ϒ ɔ ʜ Ṅ j ʜ گ ˛ ȳ ₩ Ã

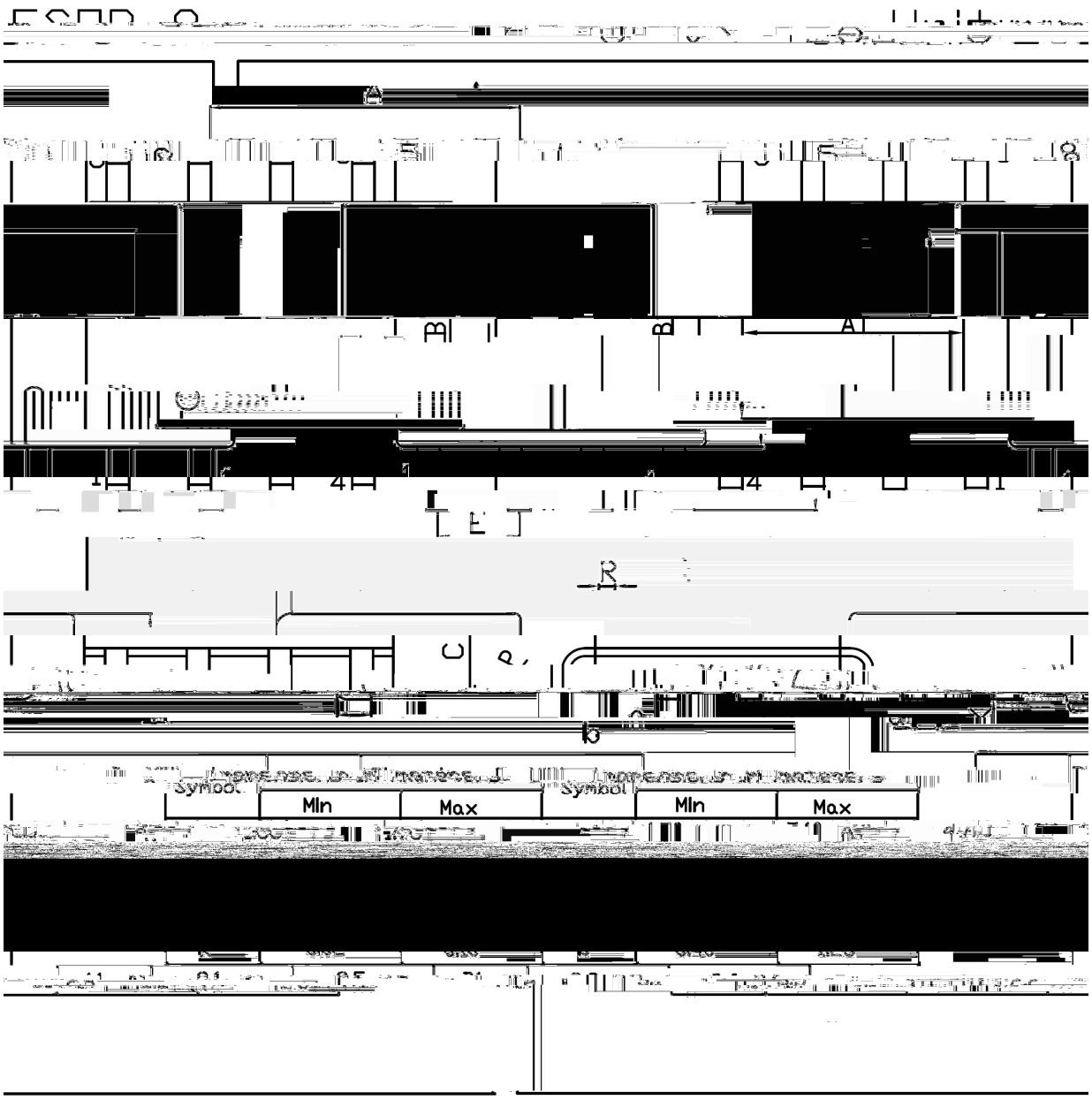
BRCL4058H SREIES Л ф Ⱨ ﻩ ă ˝ ɔ – ɾ ì Ȝ ï ɔ ت ı ˈ ѡ ѯ گ Ƀ ƍ Ł ﾄ Ẓ ŧ ʌ ɔ – ɾ ì Ṁ ₇ ƀ Ɔ Ḉ Ω ą Ę BAT Â ő ɔ Я Ⱨ GND ɔ Я 300mV ı ћ ъ Л ф Ⱨ ϒ ɔ ﾅ ت ψ Ę BAT Â ő ɔ Я ﾅ ″ ₆ Ⱨ GND ɔ Я 80mV ı ˛ Ă ㎳ ɔ –* Ẃ ì Ϙ ı % ̀H ϒ ɔ Ỉ ע Ⱥ ᵏ ʊ

CHRG FULL

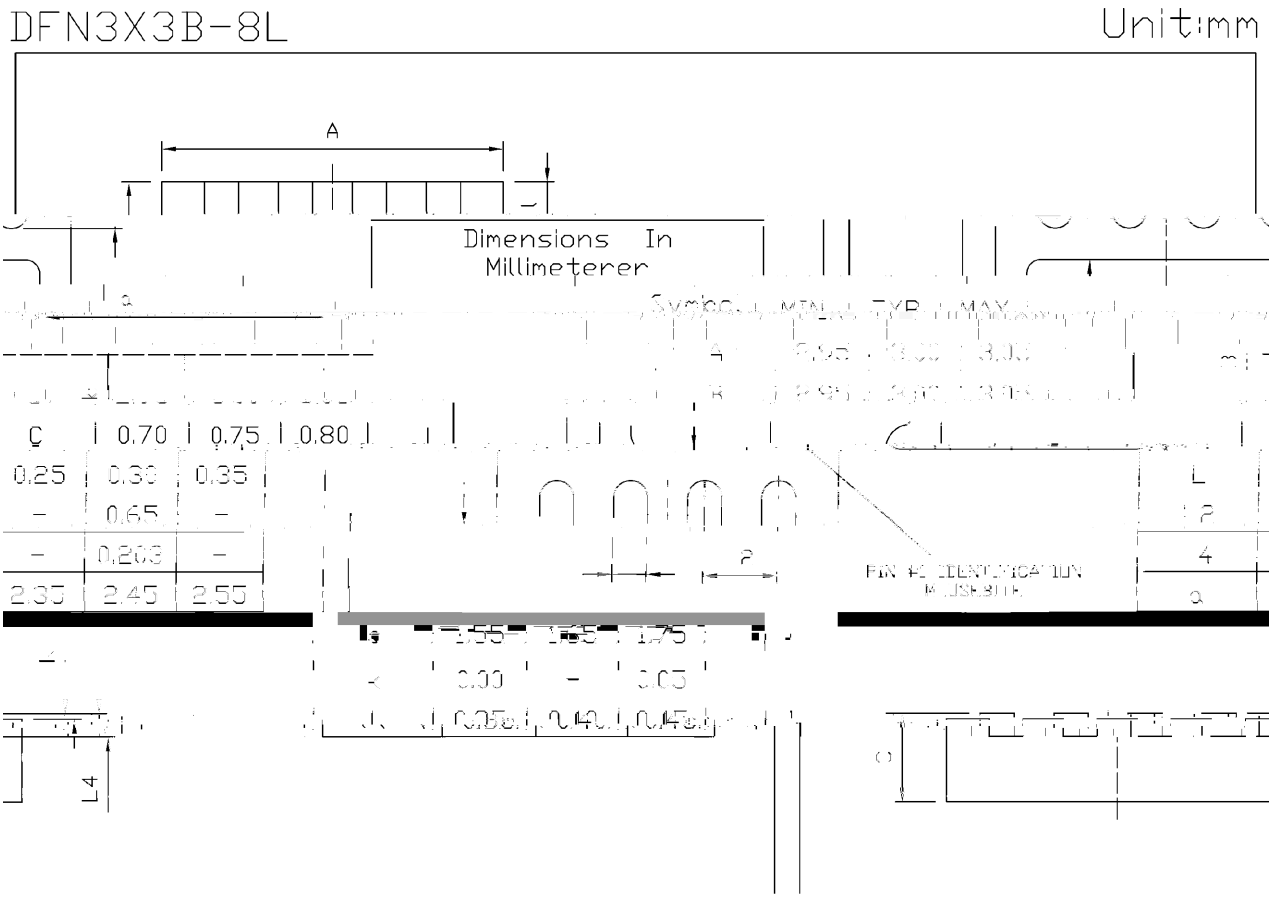
Ӿ ɔ ↑ ỗ ω ѣ ϒ j ª ⃞ ↑ ỗ ι ϒ ĩ* ƿ Ӿ ɔ ι ᴰ ϒ ĩ Ӿ ɔ Ḣ ǎ CHRG Ậ ǘ ƿ Ӿ ɔ ↑ ỗ ï ˜ĺ Ḥ Ẋ ƿ Ӿ ɔ Ḣ ǎ ↑ ỗ ï ψ ѭ ح ڳ FULL Ậ ǘ ⃞ Ṫ Ă Ǎ Ã* Ḅ ʾ ɾ ι Ӿ ɔ Ḣ ǎ ª ˜ĺ Ḥ ι Ӿ ɔ ̀H ѭ ح ڳ ỉ

Ӿ ɔ ↑ ỗ	ᴧ ˘ LED/CHRG	ᴧ ˘ LED/FULL
Ӿ ɔ	ʒ	ȯ
Ӿ ◗	ȯ	ʒ
я ڈ ڄ ɔ – □ ỷ ầ Ẃ ɔ – ɾ ì ڑ ʔ ص я	ȯ	ȯ
ɔ – ˈ ف ì	ɷ	ɷ

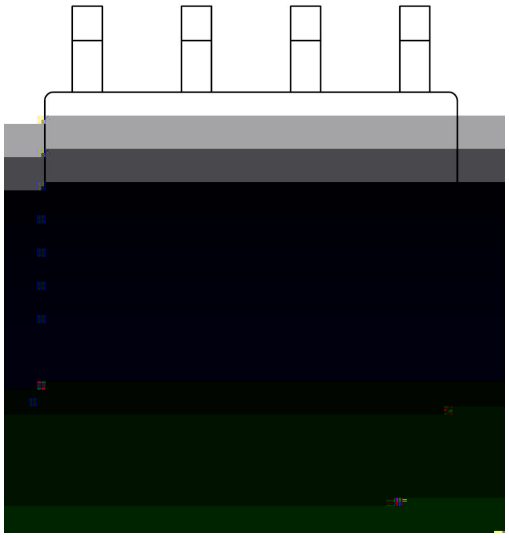
/ Package Dimensions



/ Package Dimensions



ESOP-8 / ESOP-8 Marking Instructions



ب ˝ χ

EU χ ѭ ʒ ᴵᴵ Ɱ

738 ; K χ ѭ ʒ ᴺ Ɱ

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---- χ ѭ ɬ ɾ ŋ̈ ᴺ Ɱ ı ɚ ɬ ɾ ŋ̈ ᴺ ψ ק

ʒ ᴺ	ᴍ ˥
BRCL4058HSE-4.0	BR/4058H-40/****
BRCL4058HSE-4.2	BR/4058H-42/****

DFN2×2-8L / DFN2×2-8L Marking Instructions



ب ˝ χ

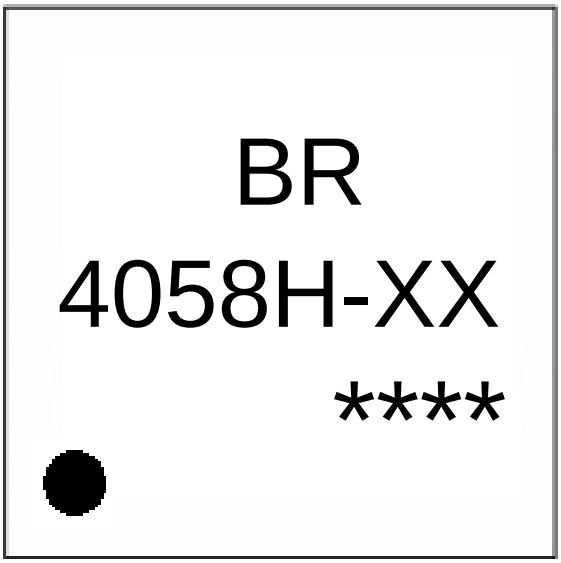
738 ; K χ ѭ ʒ ᴺ Ɱ

[[χ Ɱ ˊ ɟ ˛ ɔ я ı ḅ ï ˊ ˝A˜

- - - - χ ѭ ɬ ɾ ŋ̈ ᴺ Ɱ ı ɐ ɬ ɾ ŋ̈ ᴺ ψ ק

ʒ ᴺ	м ɿ
BRCL4058HZZ-4.0	BR/4058H-40/****
BRCL4058HZZ-4.2	BR/4058H-42/****
BRCL4058HZZ-4.35	BR/4058H-435/****

DFN3×3B-8L / DFN3×3B-8L Marking Instructions



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ʒ ᴺ	ᴍ ᴵ
BRCL4058HZR-4.0	BR/4058H-40/****
BRCL4058HZR-4.2	BR/4058H-42/****
BRCL4058HZR-4.35	BR/4058H-435/****

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

ب ˝ χ

1 أ ♬ □ ỷ 150 Ḱ 180 ɬ ı ˋH ڑ 60 Ḱ 90sec;

2 Š Ö □ ỷ 245 ° 5 ɬ ı ˋH ڑ ˋY ⅄ ⅏ 5 ° 0.5sec;

3 ì ˙ ⅄ ˛ ɔ ه ỷ ⅏ 2 Ḱ 10 ɬ /sec.

Note:

1.Preheating:150~180 ɬ , Time:60~90sec.

2.Peak Temp.:245 ° 5 ɬ , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ɬ /sec.

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

ᴖ ` ɣ ᴇ / REEL