??

U_{in}

U_{out}

R_2

R_1

R_2

$$U_{out} = \frac{R_2}{R_1 + R_2} U_{in}$$

(1)
??

$2^n -$

1

$\Delta U/2$

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$u_e >$

$\frac{U_{max}}{2}$

$u_e <$

$u_{DA}(W)$

2^n

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R_1

R_2

R_2

R_2

S_1

S_1

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$63m\Omega$

R_2

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S_1

S_2

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??

$$P_{Masterboard} = \sum \lceil n_{component} * P_{component} \rceil$$

$\lceil P_{W5500} \rceil +$

$6*$

$\lceil P_{STM32F429} \rceil +$

$4*$

$\lceil P_{DS18b20} \rceil =$

$3370mW$ (2)

,

$$P_{Slaveboard} = \sum \lceil n_{component} * P_{component} \rceil = 5*\lceil P_{STM32F303} \rceil = 2475mW$$

(3)
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$$max(C_{Convert}) = max(C_{Sample}) + C_{Signel-convert} = 601.5cyc + 12.5cyc = 614cyc$$

(4)

$$min(C_{Convert}) = min(C_{Sample}) + C_{Signel-convert} = 1.5cyc + 12.5cyc = 14cyc$$

(5)

$$min(T_{Convert}) = \frac{min(C_{Sample}) + C_{Signel-convert}}{f} = \frac{14}{14MHz} = 1\mu s$$

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red5;
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Brief Article

The Author

March 23, 2021