

Answer on Question #47798, Physics, Other

A window air conditioner has a rating of 20000 btu/h. What is this rating in watts?

Solution

$$1 \text{ btu} = 1055 \text{ J.}$$

1 h = 3600 s. Hence,

$$1 \text{ btu/h} = 1055/3600 \text{ J/s} \approx 0.239 \text{ W}$$

So

$$20000 \text{ btu/h} = 20000 \cdot 0.239 \text{ W} = 4780 \text{ W}$$