

ermined

for suppose $B_L = B_{L_0} + L_1 = B_{L_0} + L_2$
 $\Rightarrow B_{L_0} = B_{L_0} + L'$ i.e., $[B_{L_0}] = \tau_{L'}^*[B_{L_0}] \Rightarrow$

By the argument above, $\tau_{L'}$ is the identity which implies $L' = L_0$. Note here that each B_L is a principally polarized divisor, i.e.

$[B_L]$ is a principally polarized bundle by P306 ~ P307. More precisely, we can explain as follows:

① $A \xrightarrow{\mu} \text{Alb}(A) = \frac{\mathbb{C}^2}{\Lambda}$ is given by

$$L \longmapsto \left(\int_{L_0}^L \omega_1, \dots, \int_{L_0}^L \omega_g \right) \quad g=2 \quad \omega_i \in H^0(A, \Omega^1) \\ H^0(B_L, \Omega^1)$$

③ For each $B_L \subset A$, $\mu(B_L)$ is $\mu'(B_L)$, where $\mu': B_L \rightarrow f(B_L)$ is a natural map on P228, $\Rightarrow \mu'(B_L) = \mathbb{H}_L + k$ by Riemann's Theorem on P334, where \mathbb{H}_L is the theta divisor of the bundle $L \rightarrow f(B_L)$ with Chern class $c_1(L)$, is a principal polarization of $f(B_L)$ as on P307.

$$\begin{array}{ccc} A & \xleftrightarrow{\quad} & \mathbb{C}^2/\Lambda = \text{Alb}(A) \\ \downarrow \mu & & \downarrow \mu \\ B_L & \xleftrightarrow{\quad} & \mu(B_L) \end{array}$$

④ $\mu: B_L \rightarrow \mu(B_L)$ is biholomorphic, since μ , the Albanese map, is proved to be isomorphic by P583 ~ P585.

⑤ $\mu(B_L)$ is a theta divisor of a principal polarization since it is a translated divisor of a principal polarization.

③ By the argument above, $f(B_L) = \text{Alb}(A)$ for all L .