Aluminium is usually found in +3 oxidation state. In contrast, thallium exists in +1 and +3 oxidation states. This is due to

(2019 Main, 9 Jan I)

(a) lattice effect
(b) lanthanoid contraction
(c) inert pair effect
(d) diagonal relationship

Due to inert pair effect, group-13 elements (ns^2np^1) show + 3 and + 1 oxidation states in their compounds. Stability order of these oxidation states will be as,

+ 3 oxidation states

$$B^{3+} > Al^{3+} > Ga^{3+} > In^{3+} > Tl^{3+}$$

B^{3+} does not exist in free states. All B(III) compounds are covalent.

+ 1 oxidation states

$B^{+} < Al^{+} < Ga^{+} < In^{+} < Tl^{+}$

B^{+} does not exist in ionic as well covalent compounds.