APPENDIX

A. Qualitative Comparative Study between End-to-end CG-CNN

According to our previous end-to-end model-free robotic grasping method [1], we propose an end-to-end cable grasping network (End-to-End CG-CNN). A cable grasping dataset is collected with human annotated pixelwise grasping labels considering to the collision condition of the scene, as shown in Fig. 1. The grasp candidates with higher qualities are labeled with green pixels in affordance map. Fig. 1 shows the inference results of End-to-End CG-CNN fine-tuned based on model-free grasping network in [1]. End-to-End CG-CNN become unstable as the complexity of the scene increases, when the scene is very complex. Inference result 02 in Fig. 1 present the collision failed grasp candidate.

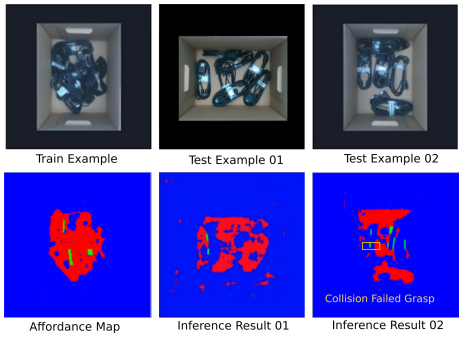

Fig. 1. Inference Results for End-to-End Cable Grasping Network. The positive, negative grasp pixels and background are respectively marked in green, red, blue.

REFERENCES

[1] L. Zhang, K. Bai, Z. Chen, Y. Shi, and J. Zhang, "Towards precise model-free robotic grasping with sim-to-real transfer learning," in *2022 IEEE International Conference on Robotics and Biomimetics (ROBIO)*. IEEE, 2022, pp. 1–8.