4P-ID Proposal

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4PID Adhoc 10/1/14

Basic 4PID Proposal

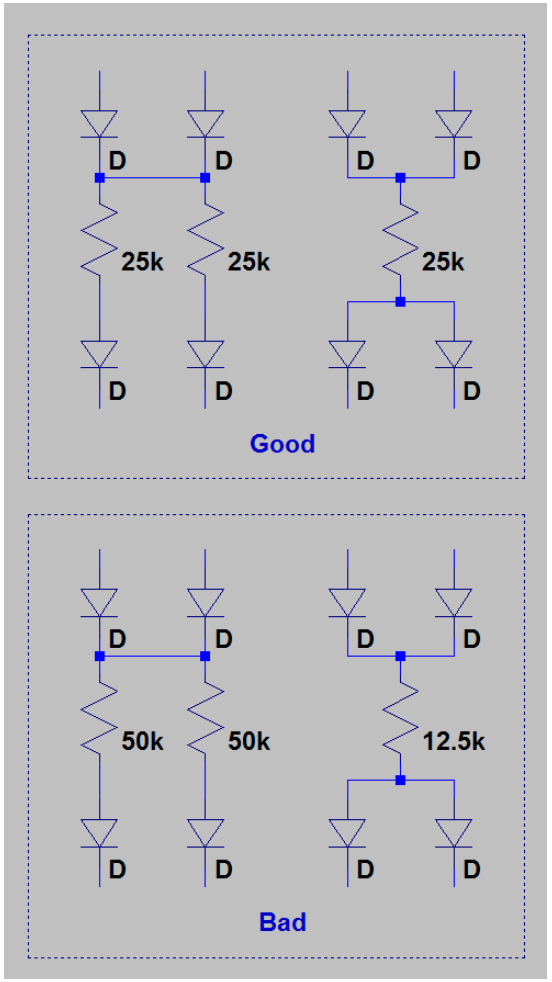
1. Check for 25k at each pair set
   - Deny or continue with 2P-only if one is bad
2. Check for parallel vs. individual resistors
   - Deny if 12.5k or 50k is sensed
3. Check class signature
   - Class 0 or no class detected: power with 13W max
     - 26W for dual PD compatibility?
   - Class 1-4: power at class level, 4P recommended
   - New class (TBD): power at class level with 4P

Step 1: Check for 25k at Each Pair Set

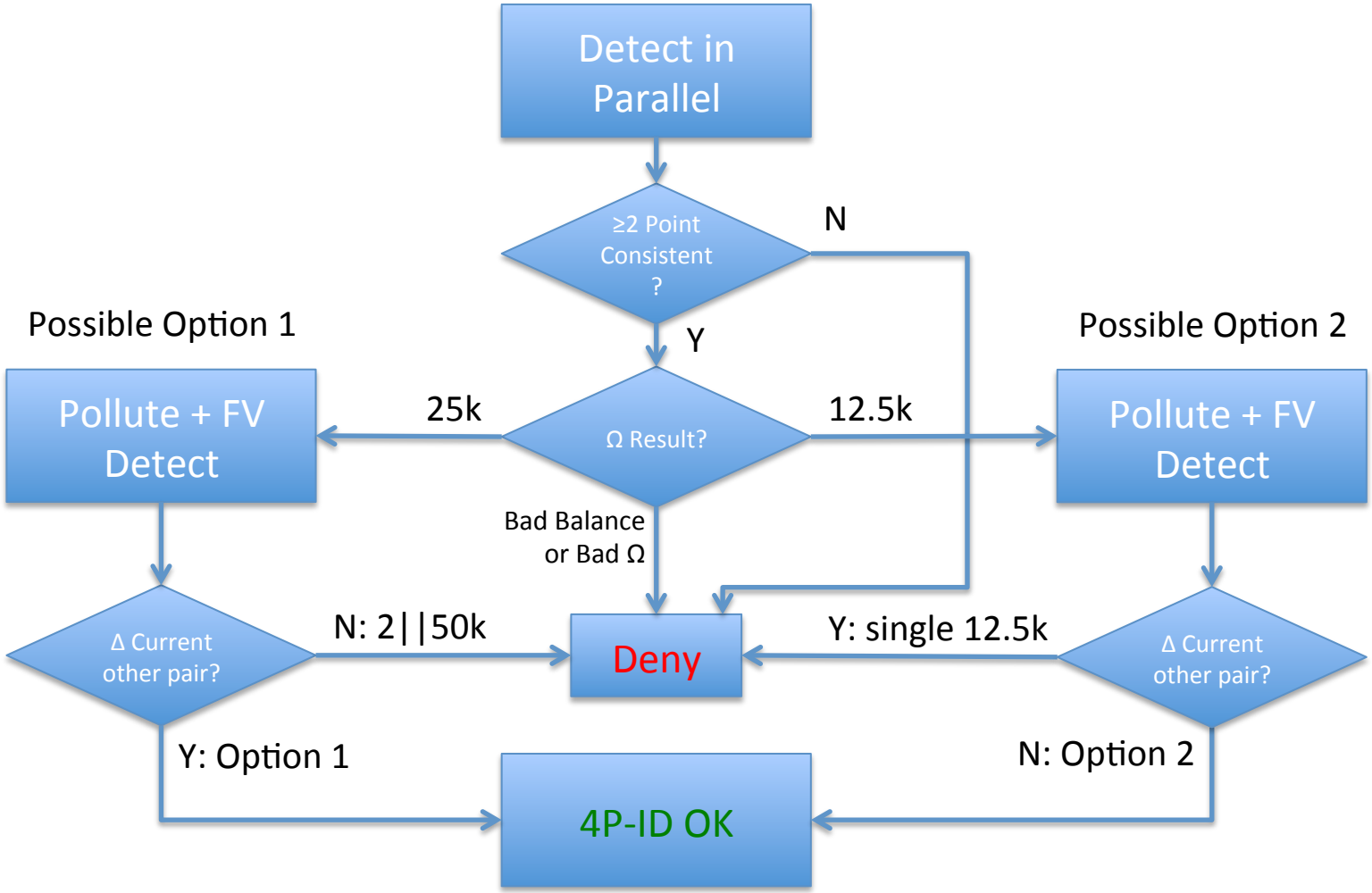
- 25k at a pair set is the AF/AT criteria for “will accept power”
- Test method for each pair set undefined in spec (beyond existing 2-point requirement)
- Test criteria defined per motion on Abramson_02_0914.pdf (page 4)
- This allows flexible implementation while strictly defining accept/reject criteria

Step 2: Check for Parallel Resistors

- This eliminates single 12.5k and 2||50k signatures
- Test method undefined in spec
- Test criteria defined:
  - Must reject 12.5k single front end
  - Must reject two 50k front ends in parallel
  - Must reject 25k || open
- **Once this test is passed, 4PID is established**



Example 4P-ID Flow Chart



Step 3: Classification Check

- Test for Class signature at each pair set to establish Mutual ID
  - Class signature for each pair set must match for Type 1/2
  - Class signature match TBD for Type 3+
- If unmatched Type 1/2: Deny or AT power (2P or 2x2P)
- If Class 0 or signature not found, PSE must limit 4P power to 13W to prevent PD overheating
- If matched Class 1-4: limit power to Class limits
- Matching, power requirements for Type 3+ TBD