Digital Potentiometer Exploration - Requirement#13

Digital Potentiometer Options

Mfr Part #	Description	Price	Resistance (Ohms)	Number of Taps
DS18030-010+	IC DGTL POT 10KOHM 256TAP 16DIP	8.5	10k	256
DS1803Z-010+	IC DGTL POT 10KOHM 256TAP 16SO	8.5	10k	256
DS1803E-100+	IC DGT POT 100KOHM 256TP 14TSSOP	8.35	100k	256
DS18030-050+	IC DGTL POT 50KOHM 256TAP 16DIP	8.5	50k	256
DS1803E-010+	IC DGT POT 10KOHM 256TAP 14TSSOP	8.5	10k	256
DS1803Z-050+T&R	IC DGTL POT 50KOHM 256TAP 16SO	8.35	50k	256
DS1803Z-100+	IC DGTL POT 100KOHM 256TAP 16SO	8.5	100k	256
DS18030-100+	IC DGT POT 100KOHM 256TAP 16DIP	8.5	100k	256
DS1803E-050+	IC DGT POT 50KOHM 256TAP 14TSSOP	8.5	50k	256
DS1803Z-010+T&R	IC DGTL POT 10KOHM 256TAP 16SOIC	8.35	10k	256
DS1803Z-050+	IC DGTL POT 50KOHM 256TAP 16SO	8.69	50k	256
DS1803E-10/T&R	IC DGT POT 10KOHM 256TAP 14TSSOP	3.9	10k	256
DS1803Z-050	IC DGTL POT 50KOHM 256TAP 16SO	3.54	50k	256
DS18030-100	IC DGT POT 100KOHM 256TAP 16DIP	3.26	100k	256

Figure 1

Many different types of digital potentiometers offer a whole host of different parameters. However, our research on the topic has led us to believe that the main parameters for our project are the resistance (Ohms) and the number of taps. The resistance is the range of ohms that the digital potentiometer can output. Most golf carts' physical potentiometers have a resistance range of 0-5k for their output, which means that any of the digital potentiometers in figure 1 are viable on that front. The second most important parameter is the number of taps a digital potentiometer has. The number of taps determines how fine of a change there can be for the output resistance. Therefore the more taps there are, the finer control that the digital potentiometer has on its output resistance. These two guiding parameters have helped us narrow down that list of digital potentiometers to the ones listed in figure 1.