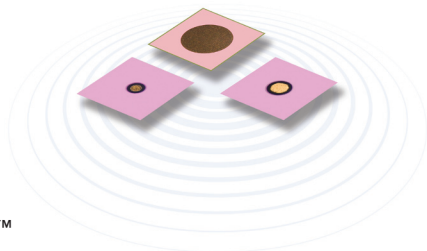


## Silicon PIN Diode Chips for Switch and Attenuator Applications

### Features








- Established Skyworks PIN diode process
- For switch and attenuator applications
- Low capacitance designs to 0.05 pF
- Voltage ratings to 100 V
- Chip size smaller than 15 mils square
- Available lead (Pb)-free, RoHS-compliant, and Green™




### Description

Skyworks APD Series of silicon PIN diode chips is designed for use as switch and attenuator devices in high-performance hybrid microwave integrated circuits. These PIN diode designs are useful over a wide range of frequencies from below 100 MHz to beyond 30 GHz. These devices utilize Skyworks well-established silicon technology resulting in high resistivity and tightly controlled I region width PIN diodes. APD0505-000 through APD0810-000 are primarily designed for fast speed through moderate speed switch applications. They have low resistance and capacitance at zero bias and reverse bias. The higher voltage APD1510-000 and the APD1520-000 are suitable for either switch or attenuator applications. The thick I region APD2220-000 is primarily designed for low-distortion attenuator applications.

## Silicon PIN Diode Chips for Switching Applications

Part Number	Nom. I Region ( $\mu\text{m}$ )	Min. Voltage Rating (V)	Max. $C_j$ @ 50 V (pF)	Max. $R_s$ @ 10 mA ( $\Omega$ )	Typ. $T_L$ (ns)	Package
 APD0505-000	5	50	0.05	2.0	30	Chip
 APD0510-000	5	50	0.10	1.5	60	Chip
 APD0520-000	5	50	0.20	1.0	80	Chip
 APD0805-000	8	100	0.05	2.0	80	Chip
 APD0810-000	8	100	0.10	1.5	100	Chip
 APD1510-000	15	200	0.10	1.2	500	Chip
 APD1520-000	15	200	0.20	0.8	700	Chip

## Silicon PIN Diode Chips for Attenuator Applications

Part Number	Nom. I Region ( $\mu\text{m}$ )	Min. Voltage Rating (V)	Max. $C_j$ @ 50 V (pF)	Max. $R_s$ @ 10 mA ( $\Omega$ )	Typ. $T_L$ (ns)	Package
 APD2220-000	50	100	0.2	3	750	Chip

 Skyworks Green™ products are lead (Pb)-free, Restriction of Hazardous Substances (RoHS)-compliant, conform to the EIA/EICTA/JEITA Joint Industry Guide (JIG) Level A guidelines, and are free from antimony trioxide, and brominated flame retardants.