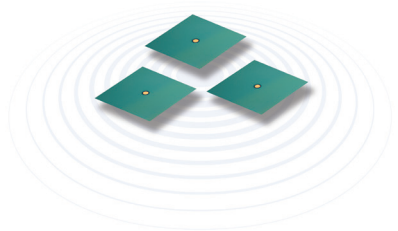


# Silicon Limiter Diode Chips

## Features

- Established Skyworks limiter diode process
- High-power, mid-range and cleanup designs
- Low insertion loss (0.1 dB at 10 GHz)
- Power handling to 66 dBm
- Tight control of basewidth
- Mesa and planar chip designs
- Available lead (Pb)-free, RoHS-compliant, and Green™












## Description

Skyworks CLA series of silicon limiter diode chips provides passive receiver protection over a wide range of frequencies from 100 MHz to beyond 30 GHz. These devices utilize Skyworks well-established silicon technology for high resistivity and tightly controlled thin base width PIN limiter diodes. Limiter circuits employing these devices will perform with strong limiting action and low loss.

The CLA series consists of eight individual chip designs of different intrinsic region basewidths and capacitances designed to accommodate multistage limiter applications. The mesa constructed, thin basewidth, low capacitance CLA4601-000, CLA4602-000, CLA4604-000 and CLA4605-000 are designed for low-level and cleanup applications. The CLA4603-000, and CLA4606-000 through CLA4608-000 are planar designs designated for high-power and mid-range applications. The CLA4609-000 thick base width mesa diode is designed for coarse limiter-stage applications.

## Silicon Limiter Diode Chips

Part Number	$V_a$ $I_a = 10 \mu A$ (V)	I Region Thickness ( $\mu m$ ) Nominal	$C_j @ 0 V$ (pF) Typ.	$C_j @ 6 V$ (pF) Max.	Series Resistance ( $R_s$ ) @ 10 mA ( $\Omega$ )	$T_L$ @ 10 mA (ns)	Typ. Input Power for 1 dB Loss (dBm)	Typ. Maximum Pulsed Input Power (dBm)	Typ. Maximum CW Input Power (W)
 CLA4601-000	15–30	1	0.12	0.1	2.5	5	7	47	2
 CLA4602-000	15–30	1	0.2	0.15	2	5	7	50	3
 CLA4603-000	20–45	1.5	0.2	0.15	2	5	10	50	2
 CLA4604-000	30–60	2	0.12	0.1	2.5	7	12	47	3
 CLA4605-000	30–60	2	0.2	0.15	2	7	12	50	4
 CLA4606-000	45–75	2.5	0.2	0.15	2	10	15	53	3
 CLA4607-000	120–180	7	0.2	0.15 @ 50 V	2	50	20	60	6
 CLA4608-000	120–180	7	0.8	0.50 @ 50 V	1.2	100	20	66	15
 CLA4609-000	250 Min.	28	0.26	0.14	1.5	1175	38	70	20



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.