Conductive Silicon Carbide Substrates and Epitaxy

KEEPING PACE WITH THE WORLD'S DEMAND FOR SiC POWER

INDUSTRY-LEADING FLEXIBILITY AND SCALE

With more than 30 years of Silicon Carbide development and manufacturing experience, Wolfspeed produces with the industry's broadest range of Silicon Carbide and Gallium Nitride on Silicon Carbide materials. Offering n-type substrates and a variety of Silicon Carbide epitaxy options, Wolfspeed delivers the quality and quantity necessary to support the rapidly expanding demand for high-efficiency SiC power semiconductors.

MATERIALS PORTFOLIO

Polytype	Surface Orientation	Supported Diameters	SiC Epitaxy
4H	4° Off-axis	150 mm	n-type
		200 mm	p-type
			Thick epitaxy

Learn how Wolfspeed can revolutionize your designs at **wolfspeed.com/materials** or contact us at materials_sales@wolfspeed.com or +1.844.200.9653

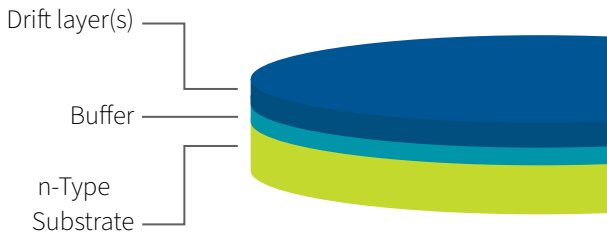
Our materials are ISO-TS 16949 certified.

SiC Substrate Product Descriptions

Part Number	Description
W4NRG4C-C1-U200	4H-Silicon Carbide, n-type, Research Grade, 150mm, 4° Off-Axis, 0.015-0.028 Ω-cm, Ultra Low MPD ≤1/cm², 350um Thick w/ 47.5mm Flat, Double-Sided Polish Silicon Face CMP Epi Ready, Bare Substrate
W4NPG4C-C1-U200	4H-Silicon Carbide, n-type, Production Grade, 150mm, 4° Off-Axis, 0.015-0.028 Ω-cm, Ultra Low MPD ≤1/cm², 350um Thick w/ 47.5mm Flat, Double-Sided Polish Silicon Face CMP Epi Ready, Bare Substrate
W4NPG4C-C1-B200	4H-Silicon Carbide, n-type, Production Grade, 150mm, 4° Off-Axis, 0.015-0.028 Ω-cm, Ultra Low MPD ≤1/cm², Low BPD ≤1500/cm², 350um Thick w/ 47.5mm Flat, Double-Sided Polish Silicon Face CMP Epi Ready, Bare Substrate
W4NPH4A-N1-0200	4H-SiC, n-type, Production Grade, 200 mm, 4° Off-Axis, 0.015-0.025 Ω·cm, 350 µm Thick w/ Notch, Double-Sided Polish Silicon Face CMP Epi Ready, Bare Substrate

SiC Epitaxy Typical Layer Options

Conductivity	n-type	p-type
Deposition	Si face	Si face
Net doping density	5E14 – 1E19/cm³	5E14 – 1E20/cm³
Thickness	0.2–200 microns	0.2–200 microns



HOW TO ORDER

W = Standard
N = n-type
G = 150 mm (6")
H = 200 mm (8")
A = 0.015 - 0.025 Ω·cm**
C = 0.015 - 0.028 Ω·cm*
0 = Standard
U = Ultra-Low MPD (≤1/cm²)
B = Low BPD (≤1500/cm²), MPD (≤1/cm²)
0 = None
S = Standard SiC (<30 µm)
T = Thick SiC (≥30 µm)

W 4 N X X 4 X - X - X 2 X X

4 = 4H-SiC
P = Production
R = Research
4 = 4° Off-Axis
C1 = 350 µm Thickness*
N1 = 350 µm Thickness w/ notch**
2 = Double-side Polish, Silicon Face CMP
0 = No Epitaxy
1 = 1 Layer
2 = 2 Layer
3 = 3 Layer
4 = 4 Layer

*Only available for 150 mm wafers.
**Only available for 200 mm wafers.