



76.2mm Silicon Carbide Epitaxial Wafer (4H Polytype, 4° Off-Axis)

Substrate Specifications			
Property	Value	Tolerance	Units
Diameter	76.2	±0.2	mm
Edge Exclusion	3		mm
Center Thickness	400 300	±30 ±30	μm
Polytype	4H	> 90% area	
Micropipe Density	Prime < 15 Standard < 30		cm ⁻³
Face Orientation, center	4.0° from <11-20>	±0.5	deg
Bow	< 25		μm
TTV	< 25		μm
Flat Length: Primary	22	±2.0	mm
Flat Length: Secondary	11	±2.0	mm
Flat Orientation: Primary	Perpendicular to (11-20) plane	±1.0	deg
Flat Orientation: Secondary	90° CW from primary flat	±5.0	deg
Resistivity	0.020	±4.0	Ω-cm

Epitaxy Specifications		
	N-type	P-type
Dopant	Nitrogen	Aluminum
Doping Concentration	3E15 – 2E19 cm ⁻³	5E15 – 5E18 cm ⁻³
Doping Uniformity	± 50%	± 50%
Thickness Uniformity		
0.2 – 9.9 um	± 15%	± 15%
10 – 50 um	± 10%	± 10%



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Part Number Information	
S4H34S4-XXX	
# of Epi Layers:	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4
Epi Thickness:	00 = No epi 06 = 5.0 – 7.0 μm 09 = 8.0 – 10.0 μm 12 = 11.0 – 13.0 μm
Off-Axis Angle:	4 = 4° toward $\langle 11\bar{2}0 \rangle$ 8 = 8° toward $\langle 11\bar{2}0 \rangle$
MPD:	S = $< 30 \text{ cm}^{-3}$ P = $< 15 \text{ cm}^{-3}$
Substrate Thickness:	3 = 300 μm 4 = 400 μm
Diameter:	2 = 50.8mm 3 = 76.2mm
Polytype:	4H = 4 Hexagonal

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