Semiconductor	SiC
Polytype	4H
Diameter	150 mm

Table 1. EPITAXY Specifications

Parameter		**Specification**	**Unit**	**Test Method**
Dopant		Nitrogen		
Epi-Layer1 (buffer) Doping Concentration	Range	1 E17 ~ 2 E18	At/cm^3	
	Tolerance	± 30	%	Tolerance calculation method: (Extreme value -Target value) /Target value
Epi-Layer1 (buffer) Thickness	Range	0.5 ~ 1	um	
	Tolerance	± 10	%	Tolerance calculation method: (Extreme value -Target value) /Target value
Epi-Layer2 Doping Concentration	Range	5E14 ~ 5E17	At/cm^3	Measured with 5 mm edge exclusion by MCV
	Tolerance	± 20	%	1.Tolerance calculation method: (Extreme value -Target value) /Target value 2. All measured points within
	Uniformity	≤ 8	%	Uniformity calculation method: Standard deviation value/Mean value
Epi-Layer2 Thickness	Range	3 ~ 30	um	1. Measured with 5 mm edge exclusion by FTIR 2.Including buffer layer thickness
	Tolerance	± 5	%	1.Tolerance calculation method: (Extreme value -Target value) /Target value 2.All measured points within
	Uniformity	≤ 5	%	Uniformity calculation method: Standard deviation value/Mean value
Total Thickness Variation (TTV)		≤ 8	um	Measured by FRT
Warp		≤ 70	um	Measured by FRT
Bow		± 60	um	Measured by FRT
Local Thickness Variation (LTV)		≤ 3.5	um	Measured by FRT, 10mm*10mm site size
Electrically Active Defects		≤ 1	cm^{-2}	1. Measured by Candela 8520 or Lasertec Sica88 2. Defects includes :Triangles, Downfalls, Carrots

Scratches (Front side surface)	Cumulative length ≤ 1X wafer diameter，Cumulative quantity ≤ 5	mm	Measured by Candela 8520 or Lasertec Sica88
Surface Roughness (Ra)	＜0.5	nm	20 µm *20 µm scan by AFM
Die yield	≥ 90	%	1. Measured by Candela 8520 or Lasertec Sica88 with 3 mm edge exclusion 2. Die size: 3mm*3 mm 3. Defects includes :Triangles, Downfalls, Scratches, Carrots
Surface Metal Contamination	＜1 E11	Atoms/ cm^2	Na/K/Ca/Fe/Ni/Cu/Zn/Au/Ag/Al/Ga/ Hg/As/Pt), Measured by ICP-MS
Backside Coating	width < 3 mm		Inspection performed using unaided eye under bright diffuse light
Backside Stains	area＜2 * 2 cm^2		Inspection performed using unaided eye under bright diffuse light

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