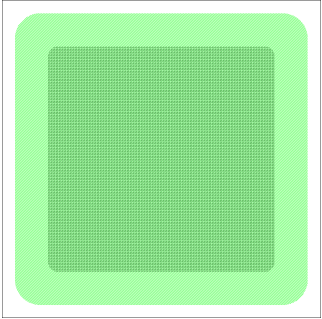


## SiC Silicon-Carbide

## 650V 15A Schottky Diode

Bonding Pad Information		Chip Information	
		Die Size (With Scribe Line)	1,956μm x 1,956μm
		Anode Pad Size	1,405μm x 1,405μm
		Scribe Line Size	100μm
		Wafer Size	4inchs
		Wafer Thickness	160μm
		Gross Die	1,689ea
		Metallization	Front Side Al/Cu : 4.0μm
			Back Side Ti/Ni/Ag : 2.0μm

Maximum Ratings (T<sub>c</sub>=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	650	V
Surge Peak Reverse Voltage	V <sub>RSM</sub>	650	V
DC Current @ T <sub>J</sub> =150°C	I <sub>F</sub>	15	A
Operating Junction and Storage Temperature Range	T <sub>J</sub>	-55 to 175	°C

Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
DC Blocking Voltage	V <sub>R</sub>	I <sub>R</sub> =100uA, T <sub>J</sub> =25°C	650	800	-	V
		I <sub>R</sub> =100uA, T <sub>J</sub> =175°C	650	780	-	
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =15A, T <sub>J</sub> =25°C	-	1.4	1.7	V
		I <sub>F</sub> =15A, T <sub>J</sub> =150°C	-	1.8	2.2	
		I <sub>F</sub> =15A, T <sub>J</sub> =175°C	-	1.9	2.4	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =650V, T <sub>J</sub> =25°C	-	1.1	55	μA
		V <sub>R</sub> =650V, T <sub>J</sub> =150°C	-	11	110	
		V <sub>R</sub> =650V, T <sub>J</sub> =175°C	-	25	250	
Total Capacitive Charge	Q <sub>C</sub>	V <sub>R</sub> =400V, T <sub>J</sub> =25°C $Q_C = \int_0^{V_R} C(V) dV$	-	32	-	nC
Total Capacitance	C <sub>j</sub>	V <sub>R</sub> =0.1V, f=1MHz	-	600	-	pF
		V <sub>R</sub> =200V, f=1MHz	-	66	-	
		V <sub>R</sub> =400V, f=1MHz	-	56	-	