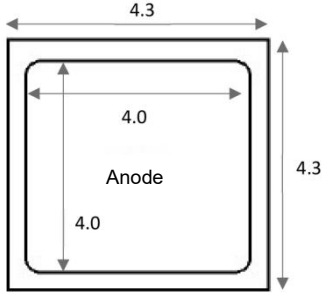


Physical Characteristics

	Die size: 4.3 mm x 4.3 mm (without scribe line) Anode pad open size: 4.0 mm x 4.0 mm Gross die / per 6" wafer = 784pcs
	Main characteristics: $V_{RRM} = 1200V$ $I_F(T_C=140^{\circ}C) = 40A$ $Q_C(V_R=1200V) = 260nC$

Mechanical Data

Parameter	Parameter
Nominal Back Metal Composition, Thickness	Ti- Ni - Ag(1.4 μ m)
Nominal Front Metal Composition, Thickness	Al(4.2 μ m)
Wafer Diameter	150mm
Wafer Thickness	175 μ m
Scribe line width	100 μ m
Passivation	Polyimide

Absolute Maximum Ratings($T_C=25^{\circ}C$, unless otherwise specified)

Parameter	Symbol	Test Condition	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		1200	V
Continuous Forward Current	I_F	$T_C= 25^{\circ}C, D=1$	92	A
		$T_C= 100^{\circ}C, D=1$	63	
		$T_C= 140^{\circ}C, D=1$	40	
Non-Repetitive Forward Surge Current	I_{FSM}	$T_C= 25^{\circ}C, t_P =10ms$	227	A
		$T_C= 125^{\circ}C, t_P =10ms$	96	
Repetitive Forward Surge Current	I_{FRM}	$T_C= 25^{\circ}C, t_P =10ms$	164	A
		$T_C= 125^{\circ}C, t_P =10ms$	69	
Power Dissipation	P_{tot}	$T_C= 25^{\circ}C$	450	W
Avalanche energy	E_{AS}	$L =0.5mH, V_{DD} =50V, T_J = 25^{\circ}C$	430	mJ
Operating and Storage Temperature	T_J, T_{STG}		-55 to 175	$^{\circ}C$

Note: All characteristics are tested with the parts assembled in TO-247-2 package, and exposure to absolute maximum ratings for prolonged time periods may affect device reliability.

Electrical Specifications($T_C=25^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Blocking Voltage	V_R	$I_R = 250\mu\text{A}$	1200			V
Reverse Current	I_R	$V_R = 1200\text{V}, T_J = 25^{\circ}\text{C}$		1	100	μA
		$V_R = 1200\text{V}, T_J = 175^{\circ}\text{C}$		50	200	
Forward Voltage	V_F	$I_F = 40\text{A}, T_J = 25^{\circ}\text{C}$		1.5	1.7	V
		$I_F = 40\text{A}, T_J = 175^{\circ}\text{C}$		2.2	2.5	
Typical Junction Capacitance	C_J	$V_R = 0.1\text{V}, f = 1\text{MHz}$		2500		pF
		$V_R = 400\text{V}, f = 1\text{MHz}$		180		
		$V_R = 800\text{V}, f = 1\text{MHz}$		160		
Total Capacitive Charge	Q_C	$V_R = 400\text{V}$		135		nC
		$V_R = 800\text{V}$		200		
Capacitive Stored Energy	E_C	$V_R = 400\text{V}$		15		μJ
		$V_R = 800\text{V}$		55		

Note: All characteristics are tested with the parts assembled in TO-247-2 package.

Thermal Resistances($T_C=25^{\circ}\text{C}$, unless otherwise specified)

Thermal Resistance from Junction – Case	$R_{\theta JC}$			0.33	0.38	$^{\circ}\text{C/W}$
Thermal Resistance from Junction – Ambient	$R_{\theta JA}$				30.8	$^{\circ}\text{C/W}$

Note: All characteristics are tested with the parts assembled in TO-247-2 package.