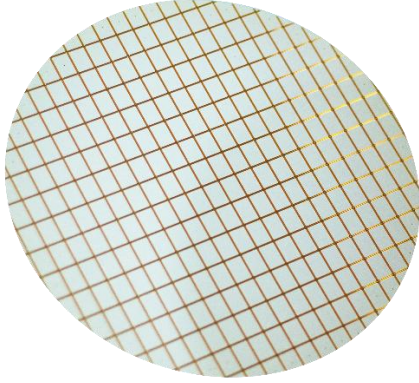


PRELIMINARY DATASHEET

SCD0060C120S24

s24 SiC Schottky Barrier Diode, 4.66 mm x 4.66 mm



$V_{RRM} = 1200\text{ V}$

$I_F = 60\text{ A}$

- s24 high surge generation diode design

Maximum ratings¹

PARAMETER	SYMBOL	CONDITIONS	MIN	MAX	UNIT
Repetitive peak reverse voltage	V_{RRM}	$T_{vj} \geq 25\text{ °C}$		1200	V
Continuous forward current	I_F	$T_{vj} < 175\text{ °C}$		60	A
Repetitive peak forward current	I_{FRM}	$T_c = 25\text{ °C}$, $t_p = 10\text{ ms}$ half sine pulse, $D = 0.1$		220	A
Non-repetitive surge forward current	I_{FSM} I^2t	$T_c = 25\text{ °C}$, $t_p = 10\text{ ms}$, half sine pulse		630 1984	A A ² s
Junction temperature	T_{vj}		-40	175	°C
Junction operating temperature	$T_{vj(op)}$		-40	175	°C



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¹ Maximum rated values indicate limits beyond which damage to the device may occur per IEC 60747



Diode²

PARAMETER	SYMBOL	CONDITIONS		MIN	TYP	MAX	UNIT
Cathode-Anode breakdown voltage	$V_{(BR)}$	$I_R = 180 \mu A$, $T_{vj} = 25^\circ C$		1200			V
Forward voltage drop	V_F	$I_F = 60 A$	$T_{vj} = 25^\circ C$		1.5		V
			$T_{vj} = 125^\circ C$		1.8		V
			$T_{vj} = 175^\circ C$		2.0		V
Reverse leakage current	I_R	$V_R = 1200 V$	$T_{vj} = 25^\circ C$		3.8	240	μA
Total capacitance	C	$T_{vj} = 25^\circ C$, $f = 1 MHz$	$V_R = 0 V$		4099		pF
			$V_R = 400 V$		262		pF
			$V_R = 800 V$		188		pF

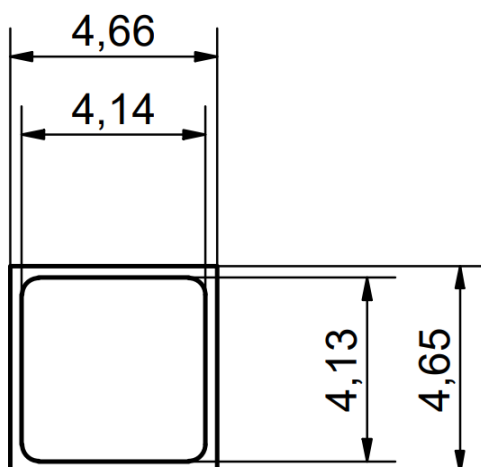
Mechanical properties 机械特性

PARAMETER		UNIT
Die size	4.66 x 4.66	mm ²
Thickness	150	μm
Wafer diameter	150	mm
Maximum chips per wafer	611	pcs
Frontside passivation	Polyimide, 6.5	μm
Frontside metal	AlCu, 4.0	μm
Backside metal	Ag, 1.2	μm

² Characteristic values according to IEC 60747-2



Chip drawing



This is an electrostatic sensitive device.

Ordering Information

Part Number	SCD0060C120s24
Package	Bare Die
Packaging Method	Wafer
RoHS	Yes