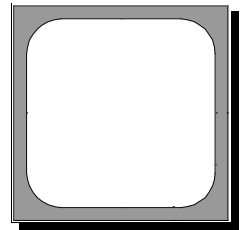
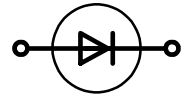


Diode Chip

Sonic



Type	Surface Ag Al	V_{RRM} [V]		$I_{F(AV)}$ [A]	Chip Size [mm] x [mm]	Package
DSHP 42	<input type="checkbox"/> Ag <input checked="" type="checkbox"/> Al	600 <input type="checkbox"/>	1700 <input type="checkbox"/>	50	8.65 4.95	sawn on foil <input checked="" type="checkbox"/>
		650 <input type="checkbox"/>	1800 <input checked="" type="checkbox"/>			unsawn wafer <input checked="" type="checkbox"/>
		1200 <input type="checkbox"/>	3300 <input type="checkbox"/>			in waffle pack <input checked="" type="checkbox"/>

Mechanical Parameters

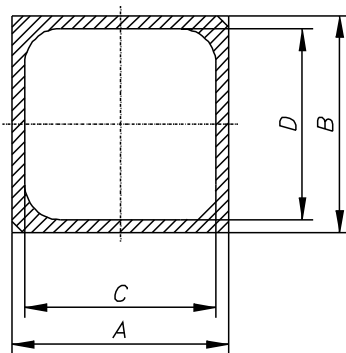
Area active	25.8 mm ²
Area total	42.8 mm ²
Wafer size Ø	150 mm
Thickness	290 µm
Material	Si
Passivation front side	polyimide
Metallization top side	bondable: Al
Metallization backside	solderable (only): Al / Ti / Ni / Ag
Recom. wire bonds (Al)	Anode Number 5
* = stitch bonds	Ø 380 µm
Reject Ink Dot Size	Ø 0.4-1.0 mm
Recom. Storage Environment	in orig. container, in dry nitrogen < 6 month
	T_{stg} -40 ... 40 °C

Features:

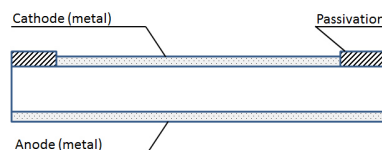
- fast, soft SONIC diode
- low forward voltage drop
- positive temperature coefficient
- low switching losses
- high ruggedness
- anode top
- $T_{vj} = 150^{\circ}\text{C}$

Applications:

- antiparallel diode for high frequency switching devices
- antisaturation diode
- snubber diode
- free wheeling diode in converters and motor control circuits
- rectifiers in switch mode power supplies (SMPS)
- inductive heating and melting
- uninterruptible power supplies (UPS)
- ultrasonic cleaners and welders



A	B	C	D
[mm]	[mm]	[mm]	[mm]
8.65	4.95	6.99	3.39



Electrical Parameters

Symbol	Conditions	Ratings			
		min.	typ.	max.	
I_R	V V_{RRM} $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		10	100	μA
			0.2		mA
V_F	$I_F = 50 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		1.90	2.20	V
			1.95		V
V_{F0}	For power-loss calculations only			1.4	V
r_F	$T_{VJ} = 150^\circ\text{C}$			18	$\text{m}\Omega$
T_{VJ}		-55		150	$^\circ\text{C}$
$I_{F(AV)}^*$	$T_C = 80^\circ\text{C}$ 180° rect.		50		A
I_{FSM}^*	$T_{VJ} = 45^\circ\text{C}$ $V = 0 \text{ V}$			400	A
R_{thJC}^*	DC current			0.4	K/W
Q_{rr} I_{RM} t_{rr} E_{rec}	V = 900 V; $I_F = 50 \text{ A}$ $-di_F/dt = 800 \text{ A}/\mu\text{s}$ $T_{VJ} = 25^\circ\text{C}$		8		μC
			50		A
			375		ns
			4		mJ
Q_{rr} I_{RM} t_{rr} E_{rec}	V = 900 V; $I_F = 50 \text{ A}$ $-di_F/dt = 800 \text{ A}/\mu\text{s}$ $T_{VJ} = 125^\circ\text{C}$		16		μC
			60		A
			670		ns
			8		mJ

* Data according to assembled

Data according to IEC 60747

Terms and Conditions of Usage

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Should you intend to use the product in aviation applications, in health or life endangering or life support applications, please notify. For any such applications we urgently recommend

- to perform joint risk and quality assessments;
- the conclusion of quality agreements;
- to establish joint measures to ensure application specific product capabilities and notify that IXYS may delivery dependent on the realization of any such measures