IXYS Diode Chip DMHP 12-065 M

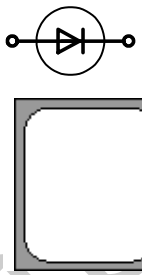
Sonic

tentative

Type	Ag* Al*	V_{RRM} [V]	$I_{F(AV)}$ [A]	Chip Size [mm] x [mm]	Package
DMHP 12	☐ ☑	650	30	4.15 3.00	sawn on foil ☑ unsawn wafer ☑* in waffle pack ☑

*Frontside options

*Please contact IXYS chip sales



Mechanical Parameters

Area active		8.20	mm²
Area total		12.45	mm²
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. soldering temp.		< 300	°C
Recom. Storage Environment			
sawn on foil	in org. container, in dry nitrogen	< 6	month
unsawn wafer	in org. container, in dry nitrogen	< 2	year
in waffle pack	in org. container, in dry nitrogen	< 2	year
	T_{stg}	-40 ... 40	°C

Features

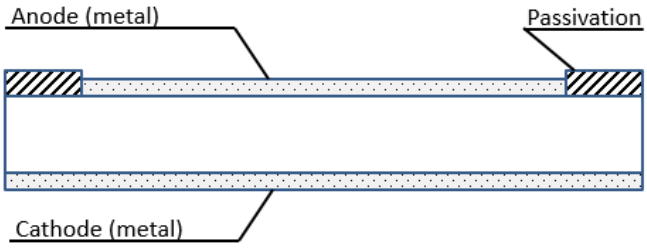
- fast, soft SONIC diode
- low forward voltage drop
- small temperature coefficient
- low switching losses
- high ruggedness
- anode top
- Tvjm = 175°C

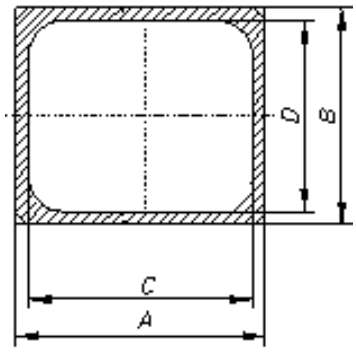
Applications

- 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

Dimensions

A [mm]	B [mm]	C [mm]	D [mm]
4.15	3.00	3.30	2.15





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Electrical parameters

Symbol	Conditions		Ratings min.	typ.	max.	
I_R	$V = V_{RRM}$	T_{VJ} = 25°C		10	100	µA
		T_{VJ} = 150°C		0.3		mA
V_F	I_F = 30 A	T_{VJ} = 25°C		1.70	2.00	V
		T_{VJ} = 150°C		1.80		V
V_{F0}	For power-loss calculations only				1.15	V
r_F	T_{VJ} = 175 °C				30	mΩ
T_{VJ}			-55		175	°C
$I_{F(AV)}$ *	T_C = 80 °C	DC		30		A
I_{FSM} *	T_{VJ} = 45°C	V = 0 V			150	A
R_{thJC} *	DC current				1.6	K/W
Q_{rr}	V = 300 V;	I_F = 30 A		1.3		µC
I_{RM}	$-di_F/dt$ = 600 A/µs	T_{VJ} = 25°C		23		A
t_{rr}				100		ns
E_{rec}				0.35		mJ
Q_{rr}	V = 300 V;	I_F = 30 A		2.6		µC
I_{RM}	$-di_F/dt$ = 600 A/µs	T_{VJ} = 150°C		27		A
t_{rr}				150		ns
E_{rec}				0.6		mJ

* Data according to assembled 380 µm DCB

Data according to IEC 60747

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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.