IXYS A Littelfuse Technology

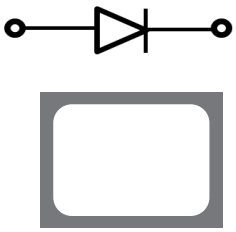
Diode Chip DSHP 106-18

Sonic

Preliminary

Type	V_{RRM} [V]	$I_{F(AV)}$ [A]	Chip Size [mm] x [mm]	Package	
DSHP 106-18	1800	163	11,4 9,4	sawn on foil	☑
				unsawn wafer	☑*
				in waffle pack	☑

*Please Contact IXYS Chip Sales



Mechanical Parameters

Area active			78,30	mm²
Area total			107,16	mm²
Wafer size Ø			150	mm
Thickness			290	µm
Die Per Wafer			132	
Material			Si	
Passivation front side			Polyimide	
Metalisation front side		bondable:	Al	
Metalisation back side		solderable (only):	Al/Ti/NiV/Ag	
Recom. wire bonds (Al)	Anode	Number	10	
*= stitch bonds		Ø	380	µm
Reject ink dot size		Ø	0.4 - 1.0	mm
Recom. solder 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
Storage temp.			-40...40	°C

Features

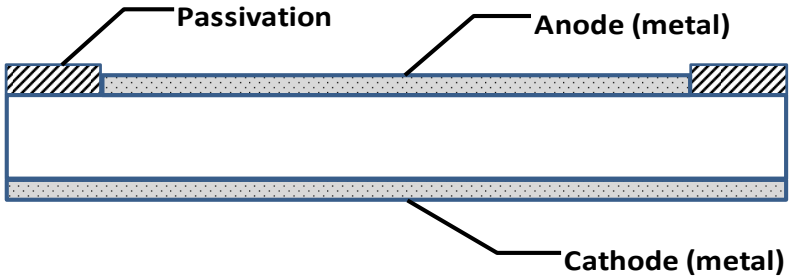
- fast, soft SONIC diode
- low forward voltage drop
- small temp. Coefficient
- low switching losses
- high ruggedness
- anode top
- Tvjm = 175°C

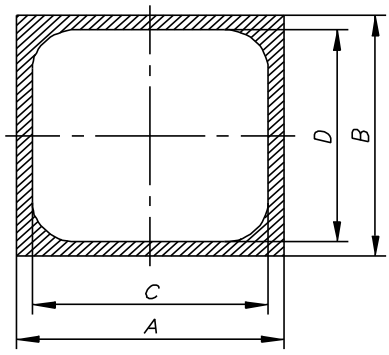
Applications

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

Dimensions

A [mm]	B [mm]	C [mm]	D [mm]
11,4	9,4	9,74	7,74





Electrical Parameters

Symbol	Conditions		Ratings min	typ	max	Units
I_R	V = V_{RRM}	Tvj = 25 °C			100	µA
		Tvj = 150 °C		3,5		mA
V_F	If = 200 A	Tvj = 25 °C		1,90	2,20	V
		Tvj = 150 °C		2,00		V
V_{F0}	For power loss calculations only				1,3	V
r_F		Tvj = 175 °C			4,8	mΩ
T_{VJ}			-55		175	°C
$I_{F(AV)}$ *	DC	Tc = 80 °C		163		A
I_{FSM} *	V = OV	Tvj = 45 °C			1200	A
R_{thJC} *	DC current				0,28	K/W
Q_{rr}						µC
I_{RM}	V = 900 V	Tvj = 25 °C				A
t_{rr}	If = 150 A	dIf/dt = 3000 A/µs				ns
E_{rec}						mJ
Q_{rr}				42		µC
I_{RM}	V = 900 V	Tvj = 150 °C		240		A
t_{rr}	If = 150 A	dIf/dt = 3000 A/µs		200		ns
E_{rec}				20		mJ

* Data according to assembled 380µm DCB

Data according to IEC 60747

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- to perform joint risks and quality assessments;

- the conclusion of quality agreements;

- to establish joint measures to ensure application specific product capabilities and notify that IXYS may deliver dependant on the realisation of any such measures.