IXYS
A Littelfuse Technology

Diode Chip DWPJ9-16

Rectifier

tentative

Circuit Diagram

Product Summary

Characteristics	Value	Unit
V_{RRM}	1600	V
$I F_{(AV)}$	13	A
Chip Dimensions	2,95x2,95	mm
unsawn wafer	Yes	
sawn on foil	Yes	
in waffle pack	Yes	

Applications

- DC Power Supplies
- Field Supply for DC motors
- Battery DC Power Supplies
- Power Rectifiers

Features

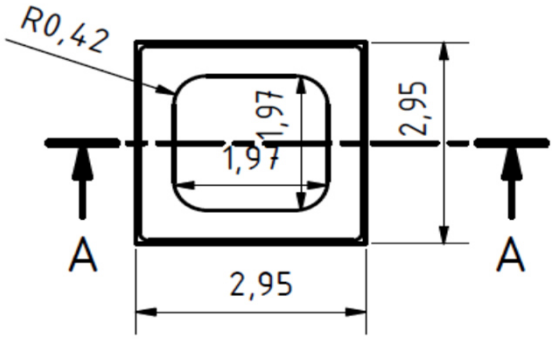
- glassivation
- advanced planar technology
- soft recovery rectifier diode
- high commutation robustness
- anode top
- Tvjm = 150°C

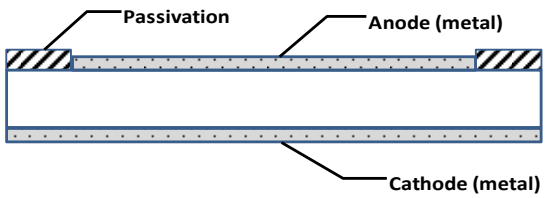
Mechanical Characteristic

Characteristic	Conditions		Value	Unit
Area active			4,00	mm²
Area total			8,70	mm²
Thickness			265	µm
Wafer size Ø			150	mm
Die Per Wafer			1614	
Material			Si	
Passivation front side			Glass	
Metalisation front side		bondable:	Al	
Metalisation back side		solderable (only):	Al/Ti/NiV/Ag	
Recom. wire bonds (Al)	Anode	Number	2	
*= 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

Dimensions

All dimensions in mm





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Electrical Parameters

Symbol	Conditions			Value			Unit
				Min	Typ	Max	
Static Characteristics							
V_R	$V = V_{RRM}$		Tvj = 25°C			1600	V
I_R	$V = V_{RRM}$		Tvj = 25°C			10	µA
			Tvj = 150°C			0,1	mA
V_F	If = 12A		Tvj = 25°C		1,10	1,20	V
			Tvj = 150°C		1,04		V
V_{F0}	For power loss calculations only					0,90	V
r_F			Tvj = 150°C			21,0	mΩ
T_{VJ}				-40		150	°C
$I_{F(AV)}$ *	DC		Tc = 100°C		13		A
R_{thJC} *	DC current					2,8	K/W
I_{FSM}	Tvj = 45 °C	t = 10 ms	(50) Hz , sine			120	A
	V_R = 0 V	t = 8.3 ms	(60) Hz , sine			120	A
	Tvj = 150 °C	t = 10 ms	(50) Hz , sine			100	A
	V_R = 0 V	t = 8.3 ms	(60) Hz , sine			100	A
I^2t	Tvj = 45 °C	t = 10 ms	(50) Hz , sine			72	A^2s
	V_R = 0 V	t = 8.3 ms	(60) Hz , sine			59	A^2s
	Tvj = 150 °C	t = 10 ms	(50) Hz , sine			50	A^2s
	V_R = 0 V	t = 8.3 ms	(60) Hz , sine			41	A^2s

* Data according to assembled 380µm DCB

Data according to IEC 60747

Terms & Conditions of Use

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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.