

JANHCA1N6638, 6642, 6643

JANKCA1N6638, 6642, 6643



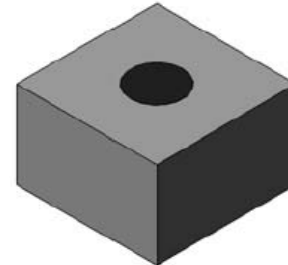
Silicon Switching Diode Chips Rev. V1

Features

- All Junctions Completely Protected with Silicon Dioxide

Description

These silicon switching diode chips are compatible with all wire bonding and die attach techniques with the exception of solder reflow.



Available in JANHC and JANKC per MIL-PRF-19500/578

Electrical Specifications: T<sub>A</sub> = +25°C (unless otherwise specified)

TYPE Number	V <sub>BR</sub> @ 100 mA	V <sub>RWM</sub>	I <sub>O</sub>	V <sub>F1</sub> I <sub>F</sub> = 10 mA	V <sub>F2</sub>	t <sub>rr</sub> IRM = I <sub>F</sub> = 10 mA	I <sub>R1</sub> V <sub>R</sub> = 20 V dc	I <sub>R2</sub> V <sub>R</sub> = V <sub>RWM</sub>	I <sub>R3</sub> V <sub>R</sub> = 20 Vdc T <sub>A</sub> = 150°C	I <sub>R4</sub> V <sub>R</sub> = V <sub>RWM</sub> T <sub>A</sub> = 150°C	Capacitance @ 0V	t <sub>fr</sub> I <sub>F</sub> = 200 mA
	Volts (min)	Volts(pk)	mA	V dc	V dc	nsec	nA dc	nA dc	µA dc	µA dc	pF	ns
6638	150	125	75	0.8	1.1 <sup>(2)</sup>	4.5	35	500	50	100	2.5	20
6642	100	75	200	0.8	1.2 <sup>(3)</sup>	5.0	25	500	50	100	5.0	20
6643	75	50	200	0.8	1.2 <sup>(3)</sup>	6.0	50	500	75	100	5.0	20

(2) I<sub>F</sub> = 200 mA  
(3) I<sub>F</sub> = 100 mA

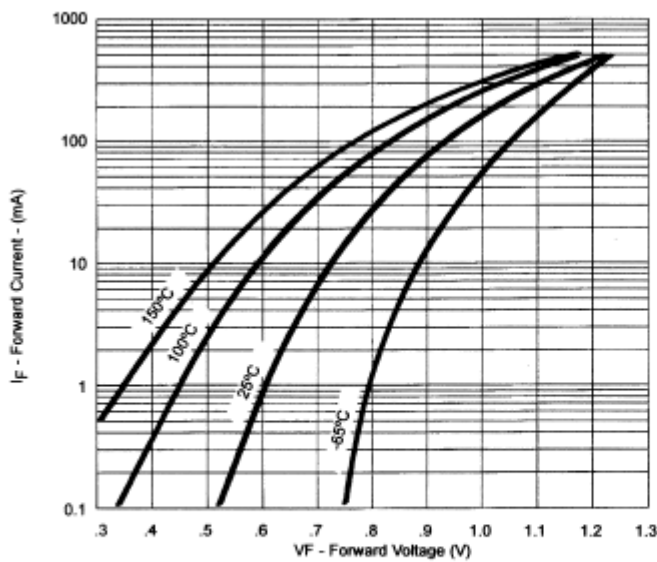
1 \* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

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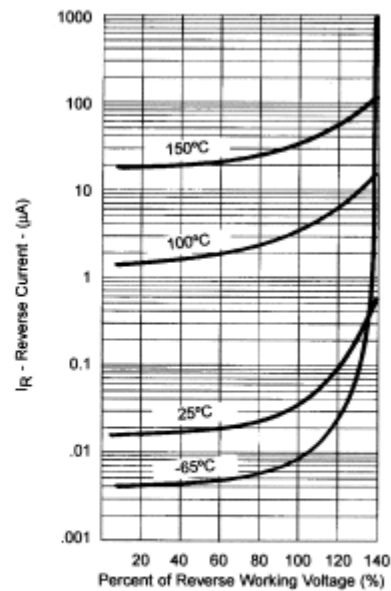
### Absolute Maximum Ratings

Parameter	Absolute Maximum
Operating Temperature	-65°C to +175°C
Storage Temperature	-65°C to +175°C
$I_{FSM}$ ( $t_p = 1/120s$ )	2.5 A (pk)

### Forward Current vs. Forward Voltage

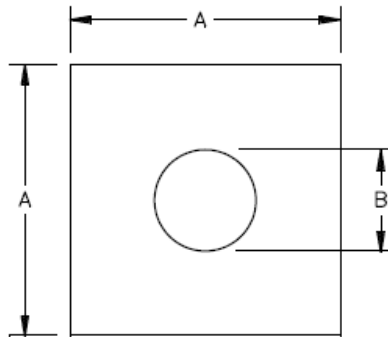


### Reverse Current vs. Reverse Voltage

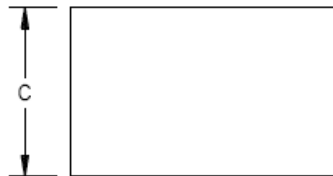


All temperature shown on graphs is junction temperature.

Outline Drawing (Die)



BACKSIDE IS CATHODE



Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
A	.014	.018	0.360	0.460
B	.005	.007	0.120	0.180
C	.008	.012	0.20	0.30

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
2. Element evaluation accomplished utilizing TO-5 package.
3. The physical characteristics of the die are:

Metallization:

Top (anode): Al

Back (cathode): Au

Al thickness: 25,000 Å minimum.

Gold thickness: 4,000 Å minimum.

Chip thickness: .010 inches (0.25 mm) ±.002 inches (0.05 mm).

FIGURE 6. Physical dimensions JANHCA and JANKCA die.

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## Silicon Switching Diode Chips

Rev. V1

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