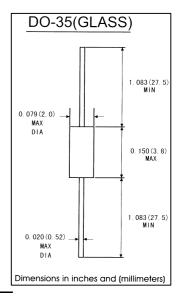
#### SILICON BIDIRECTIONAL DIAC

#### **FEATURES**

The three layer, two terminal, axial lead, hermetically sealed diacs are designed specifically for triggering thyristors. They demonstrate low breakover current at breakover voltage as they withstand peak pulse current, The breakover symmetry is within three volts (DB3, DC34, DB4) or four volts (DB6). These diacs are intended for use in thyrisitors phase control, circuits for lamp dimming, universal motor speed control, and heat control.

JF's DB3/DC34/DB4/DB6 are bi-directional trigged diode designed to operate in conjunction with Triacs and SCR's



## ABSOLUTE RATINGS(LIMITING VALUES)

Symbols	Parameters			Value				
Symbols				DC34	DB4	DB6	Units	
Pc	Power Dissipation on Printed Circuit(L=10mm)	TA=50 <b>°</b> €	150				mW	
ITRM	Repetitive Peak in-state Current	tp=10u s F=100Hz	2.0	2.0	2.0	1.6	А	
Tstg/TJ	Storage and Operating Junction Temperature		-40 to +125/-40 to 110				°C	

#### **ELECTRCAL CHARACTERISTICS**

Symbols	Parameters	Test Conditions		Value				Units
Symbols				DB3	DC34	DB4	DB6	OiillS
VBO	Breakover Voltage(Note 2)	c=22nF(Note 2)	Min	28	30	35	56	
		See diagram1	Тур	32	34	40	60	V
			Max	36	38	45	70	
+VBO -	Breakover Voltage Symmetry	c=22nF(Note 2)	Max	± 3			<u>±</u> 4	V
-VBO	Breakover voltage Symmetry	See diagram1	IVIAX				, , , , , , , , , , , , , , , , , , ,	
±Δ ∨	Dynamic Breakover Voltage(Note 1)	$\Delta$ I=(IBO to IF=10mA)	Min	5 10		10	V	
		See diagram1						10
Vo	Output Voltage(Note 1)	See diagram2	Min	5		5		V
IBO	Breakover Current(Note 1)	c=22nF(Note 2)	Max	100			μА	
tr	Rise Time(Note 1)	See Diagram 3	Тур	1.5			μs	
IB	Leakage Current(Note 1)	V <sub>B</sub> =0.5 V <sub>B</sub> O max	Max	10			11.Δ	
		see diagram 1	IVIAX					μА

Notes: 1. Electrical characteristics applicable in both forward and reverse directions.

<sup>2.</sup> Connected in parallel with the devices.

### SILICON BIDIRECTIONAL DIAC

# RATINGS AND CHARACTERISTIC CURVES DB3/DC34/DB4/DB6

#### **DIAGRAM 1: Current-voltage charateristics**

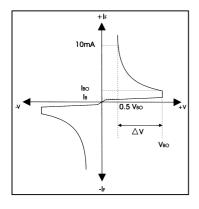


FIG.1-Power disspation versus ambient temperature(maximum values)

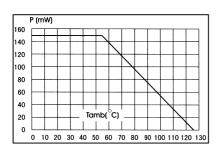
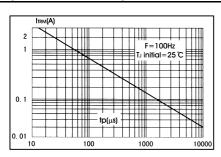


FIG.3-Peak pulse current versus pulse duration (maximum values)



**DIAGRAM 2: Test circuit for output voltage** 

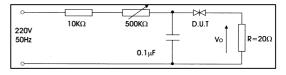


DIAGRAM 3: Test circuit see diagram2 adjust R for Ip=0.5A

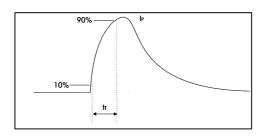


FIG.2-Relative variation of VBO versus juntion temperature(typical values)

