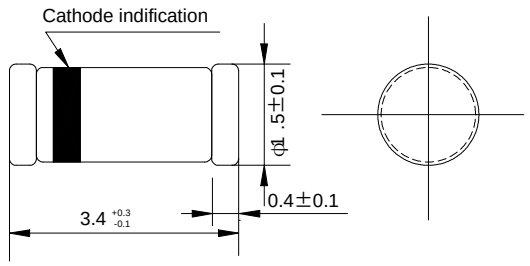
SILICON BIDIRECTIONAL DIACS

VOLTAGE RANGE: 28-45 V

FEATURES

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

MINI-MELF



Dimensions in millimeters

ABSOLUTE RATINGS

Parameters	Symbols	DB3M,DB4M	UNITS
Power dissipation on printed T_A=50°C	Pc	150.0	mW
Repetitive peak on-state current tp=20 μ S f=120Hz	I_{TRM}	2.0	A
Operating junction temperature	T_J	-40--- +125	°C
Storage temperature	T_{STG}	-40--- +125	°C

ELECTRICAL CHARACTERISTICS

Parameters		Test Conditions		DB3M	DB4M	UNITS
Breakover voltage (NOTE 1)	V_{BO}	C=22nf(NOTE 2) See FIG.1	Min	28	35	V
			Typ	32	40	
			Max	36	45	
Breakover voltage symmetry	I+V_{BO} I- I-V_{BO}I	C=22nf(NOTE 2) See FIG.1	Max	±3.0		V
Dynamic breakover voltage (NOTE 1)	I± Δ VI	Δ I=(I_{BO} to I_F=10mA) See FIG.1	Min	5.0		V
Output voltage (NOTE 1)	V_o	See FIG.2	Min	5.0		V
Breakover current (NOTE 1)	I_{BO}	C=22nf(NOTE 2)	Max	100.0		μ A
Rise time (NOTE 1)	t_r	See FIG.3	Typ	1.5		μ S
Leakage current (NOTE 1)	I_R	V_R=0.5 V_{BO} See FIG.1	Max	10.0		μ A

NOTE: 1. Electrical characteristics applicable in both forw ard and reverse dirctions.

2. Connected in parallel w ith the devices

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FIG.1--VOLTAGE-CURRENT CHARACTERISTIC CURVE

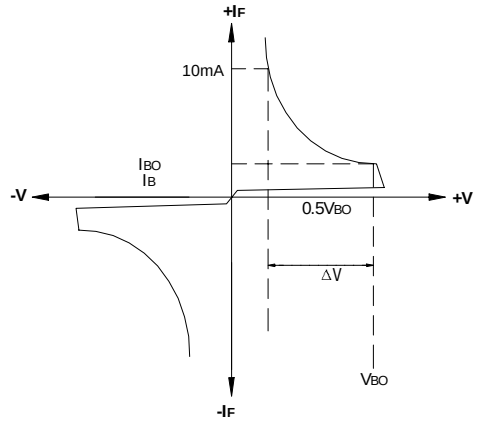

FIG.2--TEST CIRCUIT FOR OUTPUT VOLTAGE

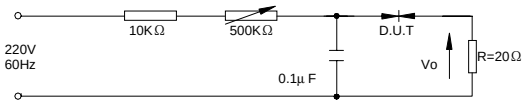

FIG.3-- TEST CIRCUIT SEE FIG.2 ADJUST R FOR I_P=0.5A

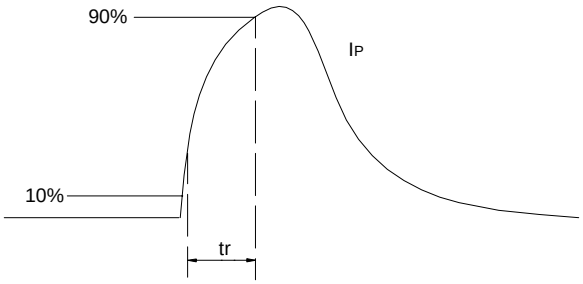

FIG.4--POWER DISSIPATION VERSUS AMBIENT TEMPERATURE (MAXIMUM VALUES)

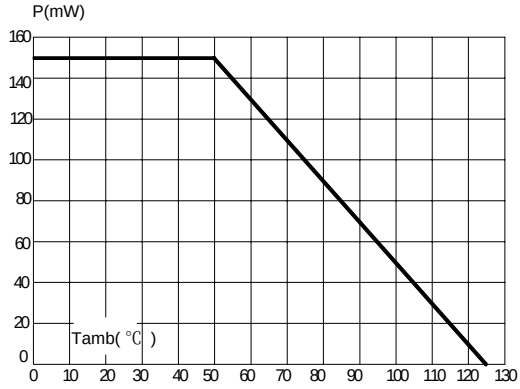

FIG.5--RELATIVE VARIATION OF V_{BO} VERSUS JUNCTION TEMPERATURE(TYPICAL VALUES)

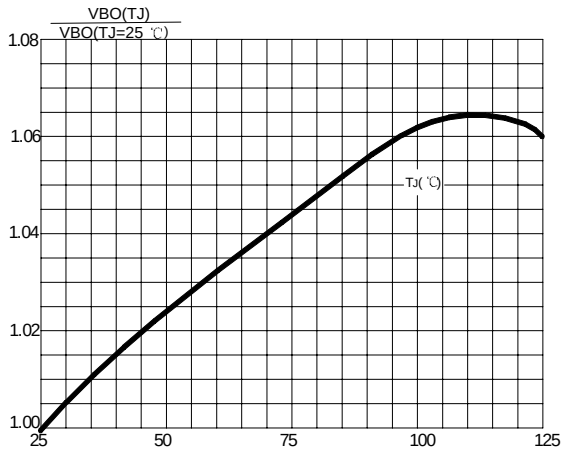

FIG.6--PEAK PULSEE CURRENT VERENT VERSUS PULSE DURATION(MAXIMUM VALUES)