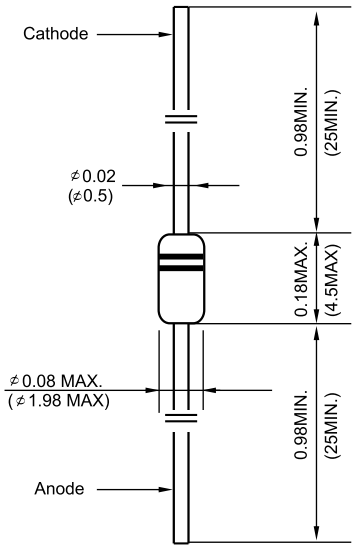
TIGER ELECTRONIC CO.,LTD

DB3/DB4

Silicon Bidirectional Diacs

VOLTAGE RANGE: 28-45 V

DO-35



Dimensions in inches and (millimeters)

Features

◇ The three layer,two termnal,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,DB4). These diacs are intended for use in thyrisitors phase control,circuits for lamp dimming, universal motor speed control,and heat control.

ABSOLUTE RATINGS

Parameters	Symbols	DB3,DB4	UNITS
Power dissipation on printed T_A=50°C circuit (L=10mm)	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		DB3	DB4	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	$\|+V_{BO}\|-\|-V_{BO}\|$	C=22nf(NOTE 2) See FIG.1	Max	±3.0		V
Dynamic breakover voltage (NOTE 1)	$\|\pm\Delta V\|$	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

DB3/DB4

Silicon Bidirectional Diacs

Ratings and Characteristic Curves

FIG.1--VOLTAGE-CURRENT CHARACTERISTIC CURVE

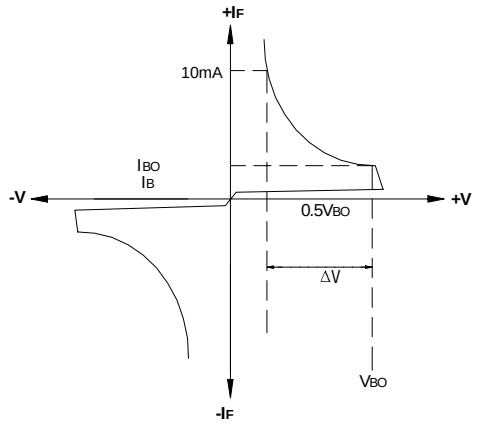


FIG.2--TEST CIRCUIT FOR OUTPUT VOLTAGE

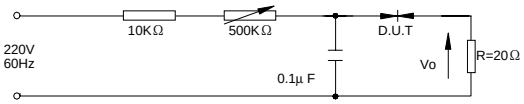


FIG.3-- TEST CIRCUIT SEE FIG.2 ADJUST R FOR I_P=0.5A

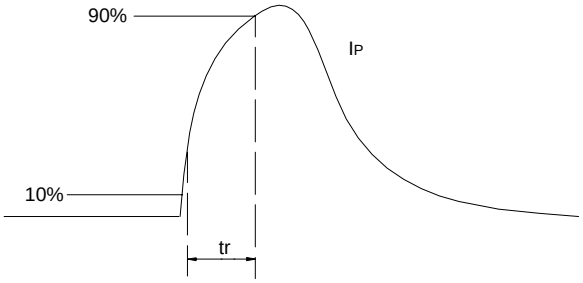


FIG.4--POWER DISSIPATION VERSUS AMBIENT TEMPERATURE (MAXIMUM VALUES)

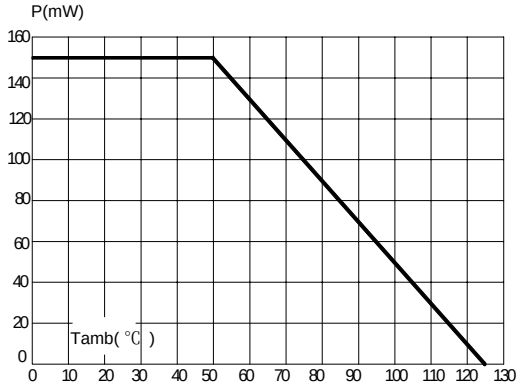


FIG.5--RELATIVE VARIATION OF V_{BO} VERSUS JUNCTION TEMPERATURE(TYPICAL VALUES)

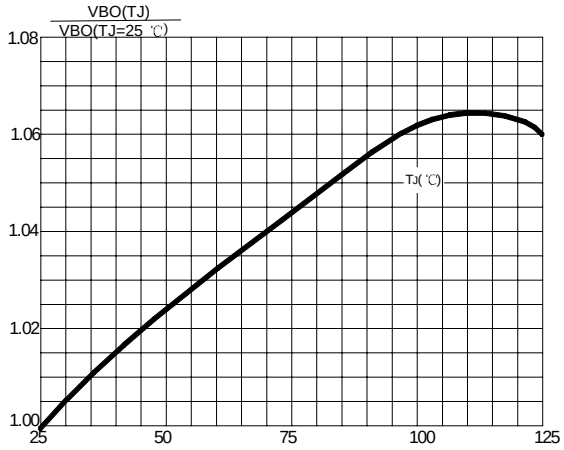


FIG.6--PEAK PULSEE CURRENT VERENT VERSUS PULSE DURATION(MAXIMUM VALUES)