

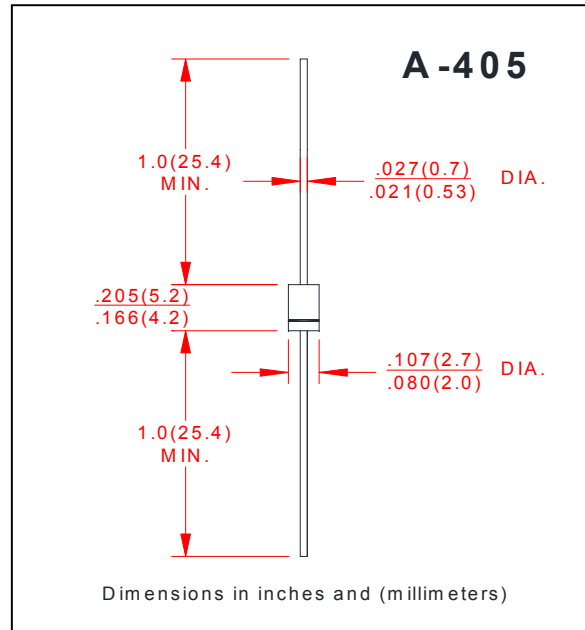


SIGNAL BIDIRECTIONAL DIAC

DB3 - DB4

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. These diacs are intended for use in thyristors phase control, circuits for lamp dimming, universal motor speed control, and heat control. TY'S DB3/DB4 are bidirectional trigged diode designed to operate in conjunction With Triacs and SCR's.



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified

Parameters	Test Conditions	SYMBOLS		DB3	DB4	UNITS
Power Dissipation on Printed Circuit(L=10mm)	T _A =50°C	P _C		150		mW
Repetitive Peak in-state Current	t _p =10μS, F=100Hz	I _{TRM}		2.0		A
Breakover Voltage(Note2)	c=22nF(Note2) See diagram1	V _{BO}	Min	28	35	V
			Typ	32	40	
			Max	36	45	
Breakover Voltage Symmetry	c=22nF(Note2) See diagram1	$\frac{ +V_{BO} }{ -V_{BO} }$	Max	±3		V
Dynamic Breakover Voltage (Note1)	$\Delta I=(I_{BO} \text{ to } I_r=10\text{mA})$ See diagram1	$ \pm \Delta V $	Min	5		V
Output Voltage(Note1)	See diagram2	V _O	Min	5		V
Breakover Current (Note1)	c=22nF (Note2)	I _{BO}	Max	100		μA
Rise Time(Note1)	See diagram 3	t _r	Typ	1.5		μS
Leakage Current(Note1)	V _B =0.5V _{BO} max see diagram1	I _B	Max	10		μA
Operating and Storage Temperature Range		T _J , T _{STG}		-40 to +110/-40 to +125		°C
Thermal Resistance Junction to ambient		R _{θJA}		400		°C/W
Thermal Resistance Junction to Lead		R _{θJL}		150		°C/W

Notes:

- Electrical characteristics applicable in both forward and reverse directions
- Connected in parallel with the devices

DB3 - DB4

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

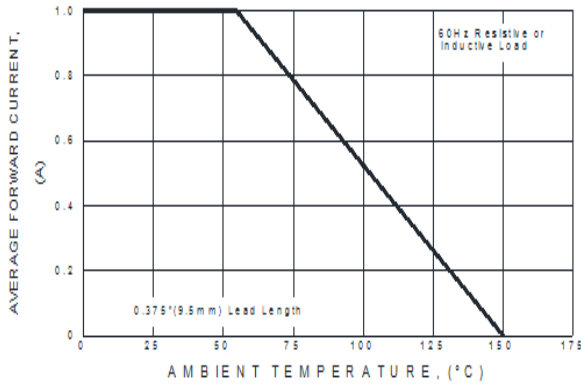


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

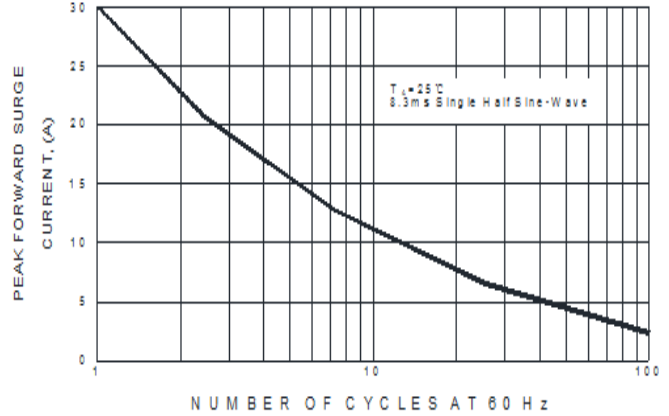


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

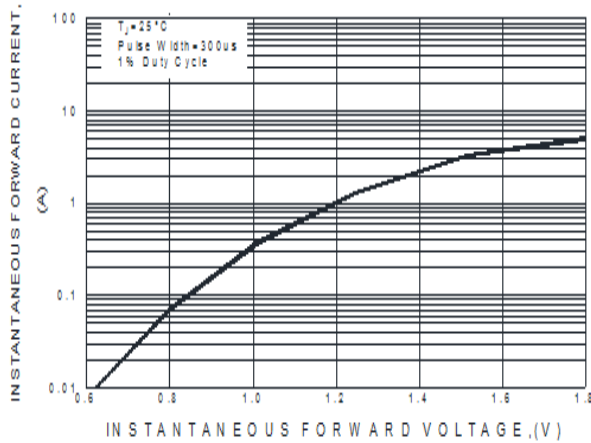


FIG.5-TYPICAL JUNCTION CAPACITANCE

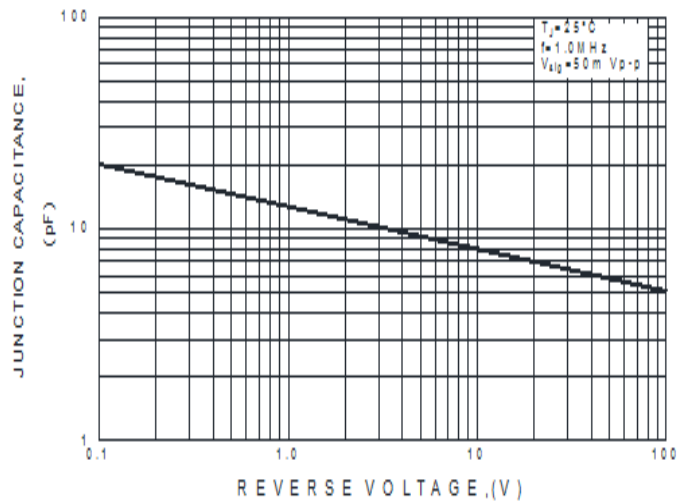


FIG.6-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT

