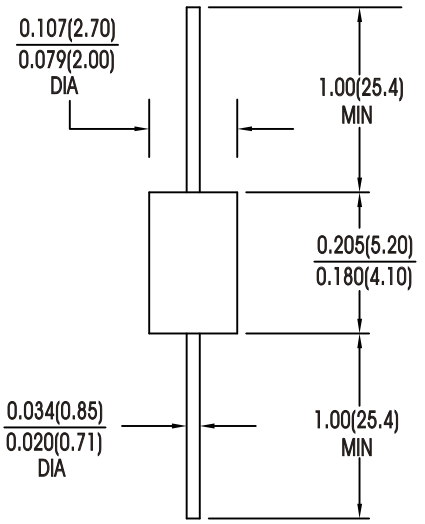
DB105A(B)(C) THRU DB300A(B)(C)

BILATERAL VOLTAGE TRIGGERED SWITCH

FEATURES:

- Bilateral voltage triggered
- AC circit oriented
- Glass passivdted junctions
- High surge current capabilities

DO-41



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: DO-41 case

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temp. unless otherwise specified.

Single phase, half sine wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20 %.

Characteristic	Symbol	DB 105A	DB 110A	DB 120A	DB 130A	DB 140A	DB 150A	DB 200A	DB 220A	DB 240A	DB 250A	DB 300A	Units
Repetitive peak off-state voltage MIN	V_{BO}	95	104	110	120	130	140	190	205	220	240	270	Volts
Repetitive peak off-state voltage MAX	V_{BO}	113	118	125	138	146	170	215	230	250	280	300	Volts
Minimum breakover voltage, 50Hz/60Hz sine wave	V_{DRM}	±90						±180		±190			Volts
Maximum breakover current, 50Hz/60Hz sine wave	I_{BO}	10											μA
Maximum repetive peak off-stare current, 50Hz/60Hz sine wave	I_{DRM}	10											μA
Maximum on-ststе RMS current, TJ≦+110 ℃ 50Hz/60Hz sine wave	$I_{T(RMS)}$	1.0											A
Maximum dynamic holding current, 50Hz/60Hz sine wave R=100Ω	I_H	150											mA
Typical peak on-state voltage (I_T=1A)	V_{TM}	1.5											Volts
Peak one cycle surge current sine wave(non-repetitive) 50Hz	I_{TSM}	16.7											A
Peak one cycle surge current sine wave(non-repetitive) 60Hz	I_{TSM}	20											A
Switching resistance (V_{BO}-Vs)/(I_S-I_{BO}) 60Hz sine wave	R_S	0.1											KΩ
Operating temperature range	T_J	-40 to+110											℃
Storage temperature range	Tstg	-65 to+150											℃

NOTE:

1.With Suffix " B " for DO-15 Molded Plastic and " C " for DO-201AD Moldes Plastic

FIG.1 V-ICharacteristics

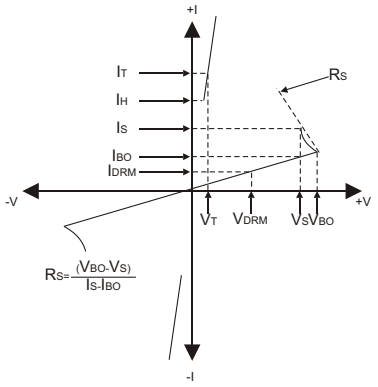


FIG.2 Peak surge current vs surge current duration

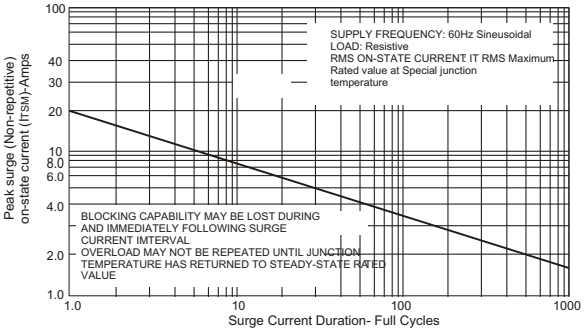


FIG.3 Normalized DC Holding Current vs case/Lead Temperature

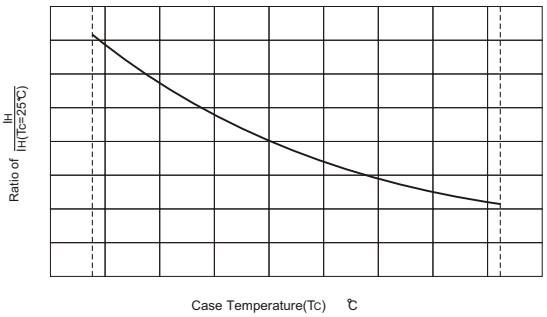


FIG.4 Maximum Allowable Ambient temperature vs on-stsae Current

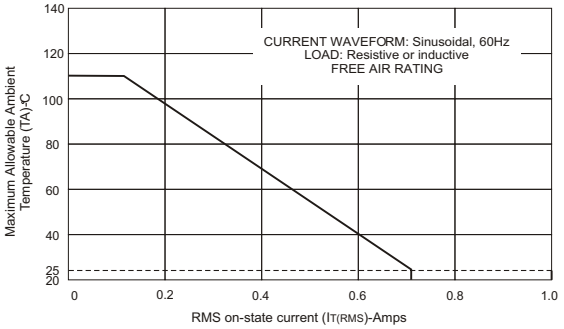


FIG.5 Typical Metal Halide Ignitor Circuit

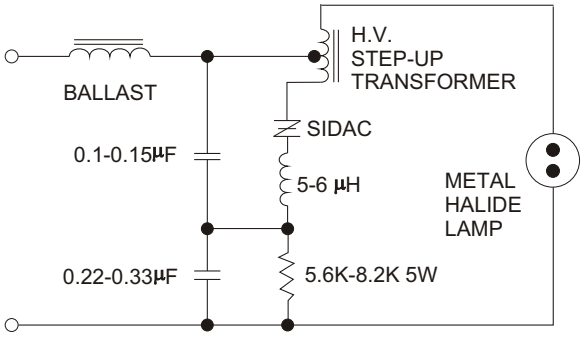


FIG.6 Normalized CBO Changes vs Case Temperature

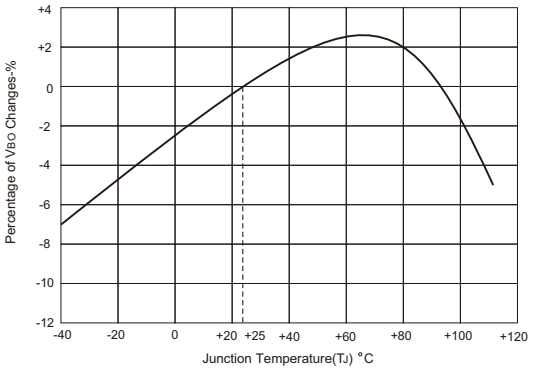


FIG.7 Comparison of SIDAC vs SCR

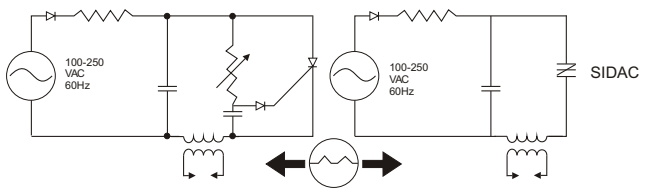


FIG.8 Xenon Lamp Flashing Circuit

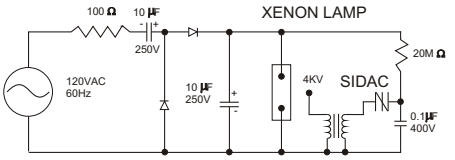


FIG.9 Dynamic Holding Current Test Circuit for SIDAC

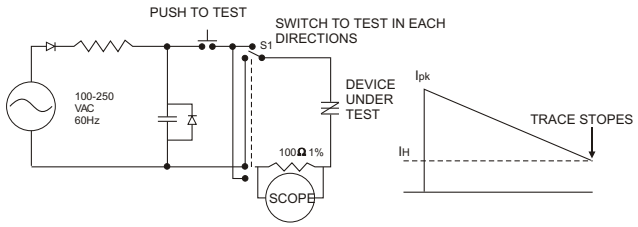


FIG.10 Basic SIDAC Circuit

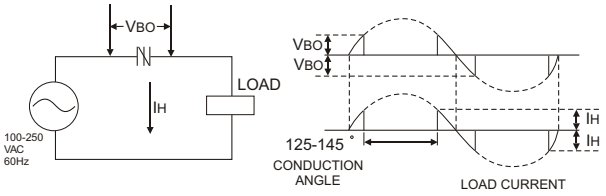
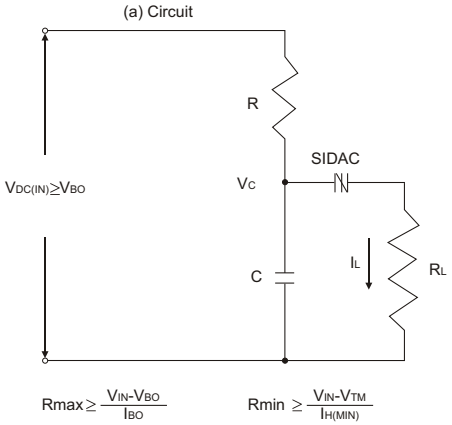


FIG.11 Relaxation Oscillator Using a SIDAC



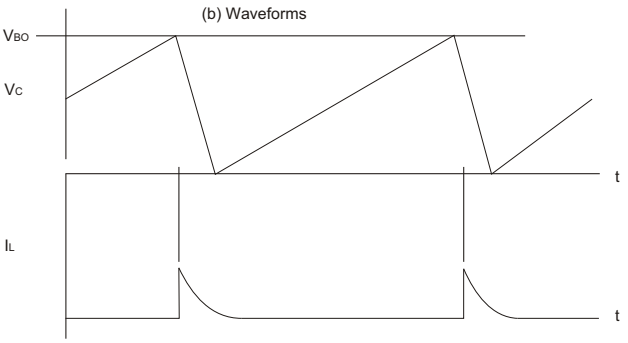


FIG.12 Repetitive Peak On-State Current (I_{TRM}) vs Pulse Width at Various Frequencies

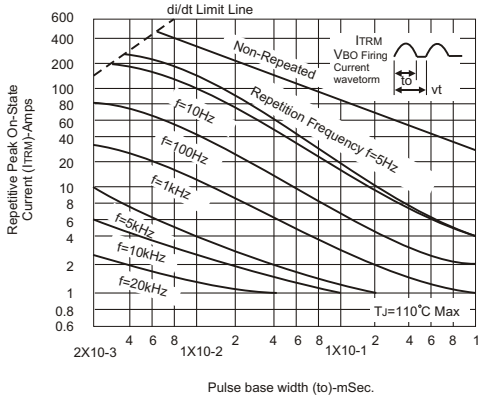


FIG.13 Normalized Repetitive Peak Breakover Current vs Junction Temperature

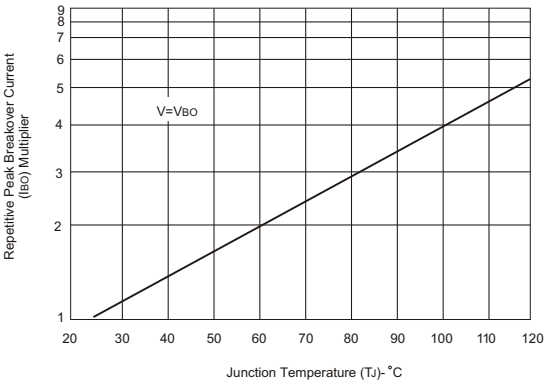


FIG.14 On-State Current vs On-State Voltage

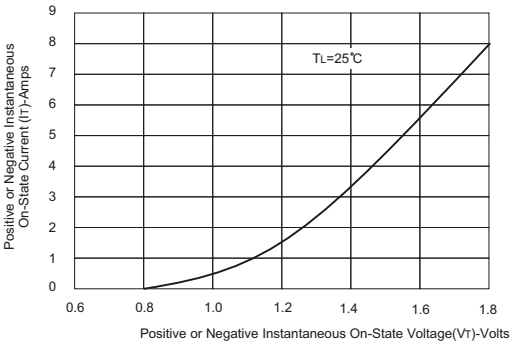


FIG.15 Ignitor Circuit (Low Voltage Input)

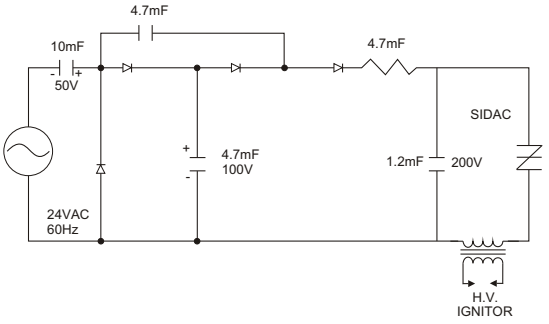


FIG.16 Power Dissipation (Typical) vs On-State Current

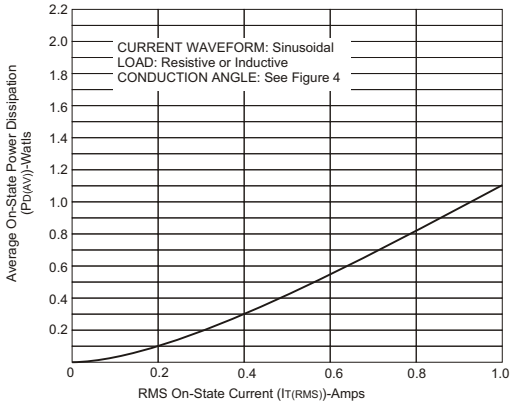


FIG.17 Typical High Pressure Sodium Lamp Firing Circuit