

Figure 1: Characteristics

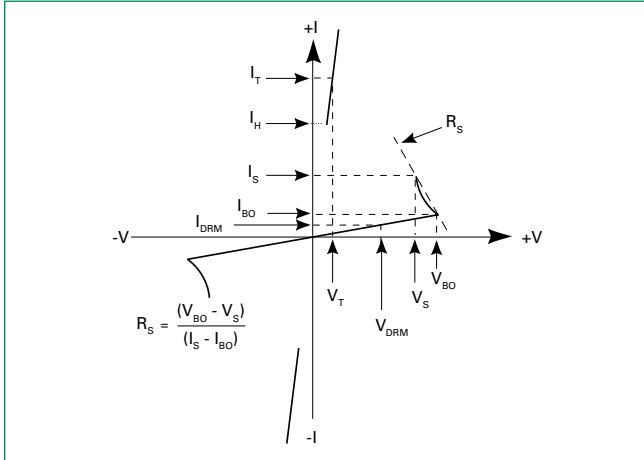


Figure 2: Maximum Allowable Lead/Tab Temperature vs. On-State Current

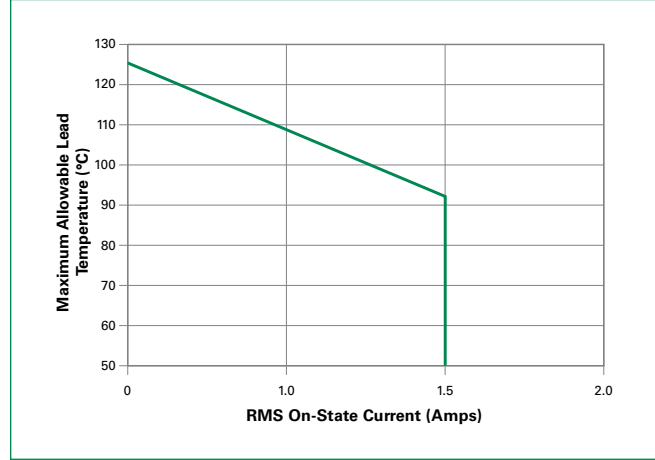


Figure 3: Power Dissipation (Typical) vs. On-State Current

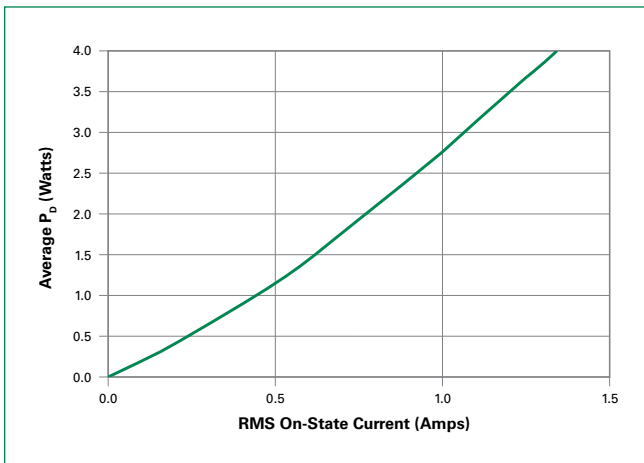


Figure 4: V_{BO} Change vs. Junction Temperature

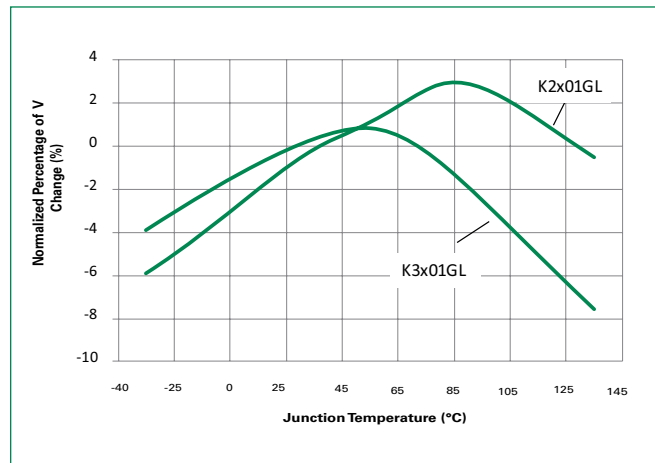


Figure 5: Pulse On-State Current Rating

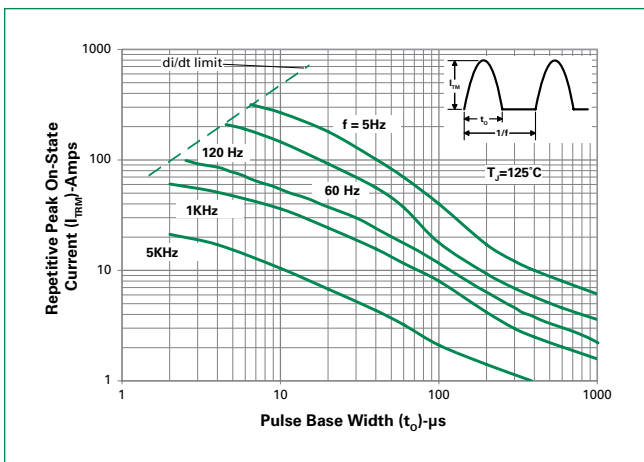


Figure 6: Maximum Allowable Ambient Temperature vs. On-State Current

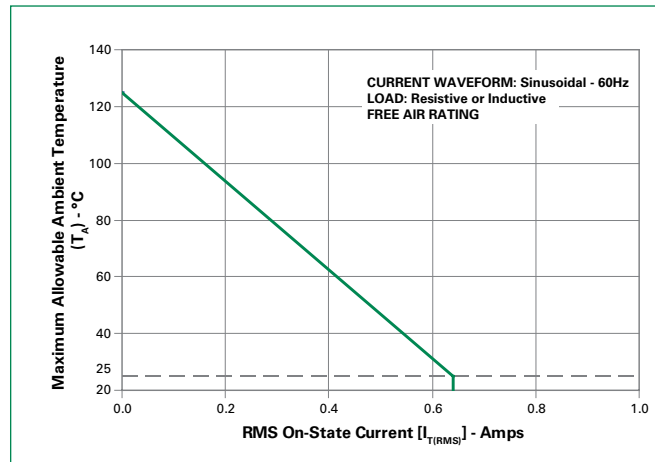


Figure 7: Peak Surge Current vs Surge Current Duration

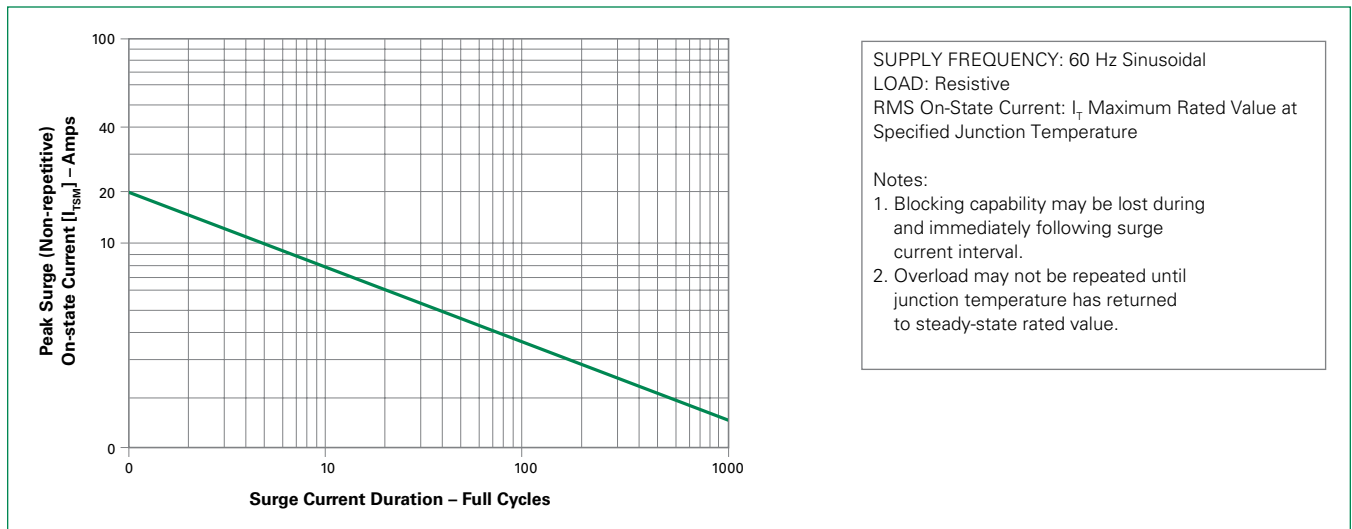


Figure 8: Typical On-State Voltage vs On-State Current

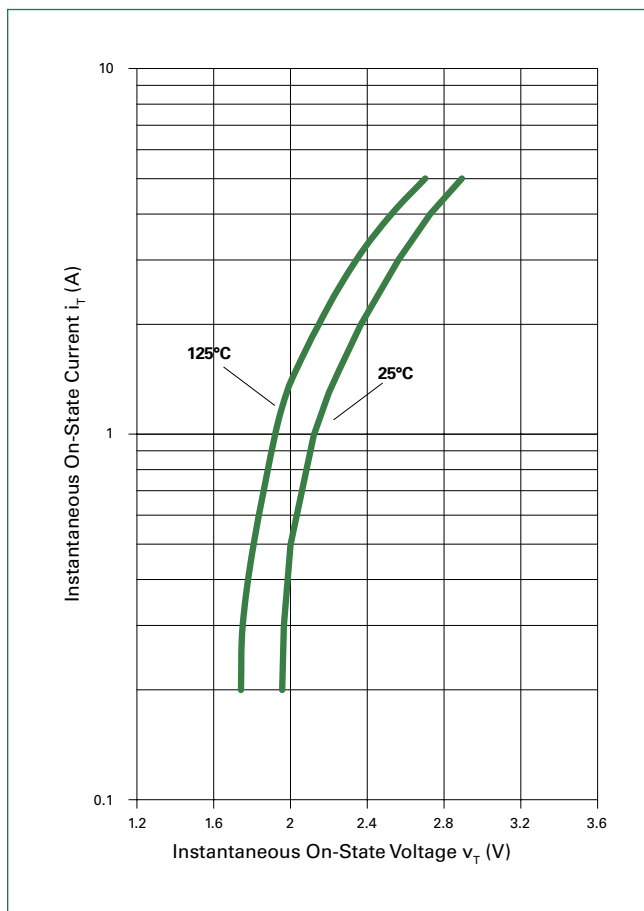
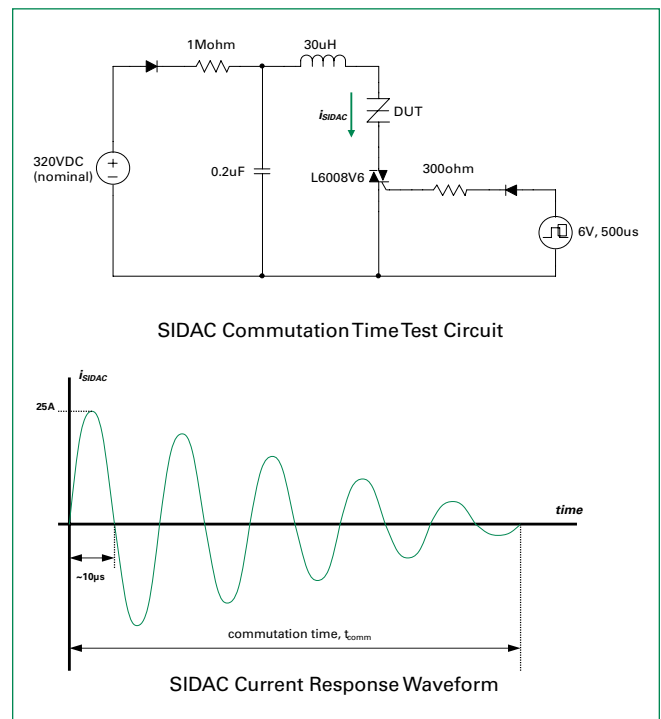


Figure 9: Multipulse™ SIDAC t_{COMM} Commutation Time



Additional Information



Datasheet

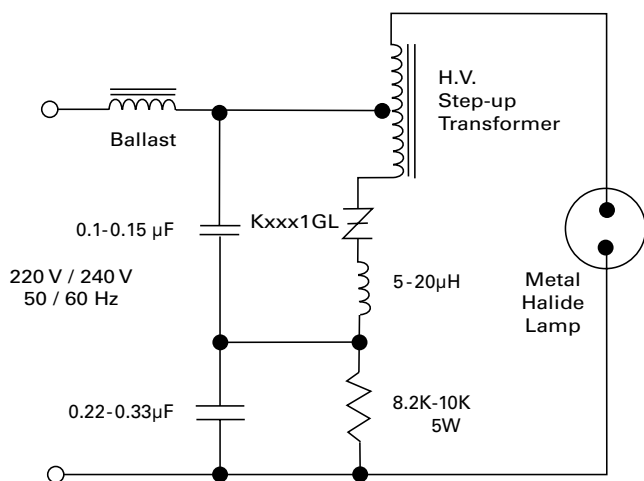


Resources



Samples

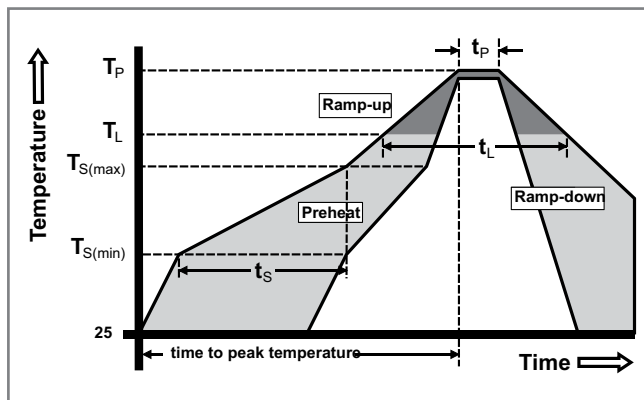
Figure 10: Typical Metal Halide Ignitor Circuit



Note: With proper component selection, this circuit will produce three pulses for ignition of metal halide lamp that requires a minimum of three pulses at 5kV magnitude and >1uSec duration each at a minimum repetition rate of 3.3kHz.

Soldering Parameters

Reflow Condition		Pb – Free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp) (T_L) to peak		5°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		5°C/second max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		280°C



Physical Specifications

Terminal Finish	100% Matte Tin Plated
Body Material	UL recognized epoxy meeting flammability classification 94V-0
Lead Material	Copper Alloy

Package	Weight / unit (mg)
DO-15	385

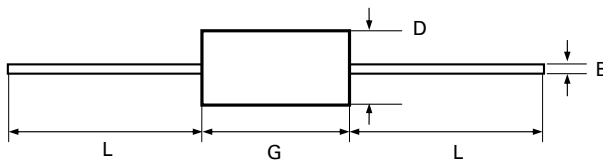
Design Considerations

Careful selection of the correct device for the application's operating parameters and environment will go a long way toward extending the operating life of the Thyristor. Overheating and surge currents are the main killers of SIDACs. Correct mounting, soldering, and forming of the leads also help protect against component damage.

Reliability/Environmental Tests

Test	Specifications and Conditions
High Temperature Voltage Blocking	MIL-STD-750: Method 1040, Condition A Rated V_{DRM} (VAC-peak), 125°C, 1008 hours
Temperature Cycling	MIL-STD-750: Method 1051, 100 cycles; -40°C to 150°C, 15-minute dwell time
Temperature / Humidity	EIA/JEDEC: JESD22-A101 1008 hours; 160V - DC: 85°C; 85% relative humidity
High Temp Storage	MIL-STD-750: Method 1031 150°C, 1008 hours
Low-Temp Storage	-40°C, 1008 hours
Thermal Shock	MIL-STD-750: Method 1056 10 cycles; 0°C to 100°C; 5-minute dwell-time at each temperature; 10-sec (max) transfer time between temperature
Autoclave	EIA/JEDEC: JESD22-A102 168 hours (121°C at 2 ATMs) and 100% RH
Resistance to Solder Heat	MIL-STD-750: Method 2031 260°C, 10 seconds
Solderability	ANSI/J-STD-002: Category 3, Test A
Repetitive Surge Life Testing	Multi firings per half cycle at 60Hz in application circuit for 168 hours minimum

Dimensions — DO-15 (G Package)



Dimension	Inches		Millimeters	
	Max	Max	Min	Max
B	0.028	0.034	0.711	0.864
D	0.120	0.140	3.048	3.556
G	0.235	0.270	5.969	6.858
L	1.000		25.400	

Product Selector

Part Number	Switching Voltage Range		Blocking Voltage	Packages
	V_{BO} Minimum	V_{BO} Maximum	V_{DRM}	
K2201GL	200V	230V	180V	DO-15
K2401GL	220V	250V	190V	DO-15
K2501GL	240V	265V	200V	DO-15
K3601GL	340V	380V	270V	DO-15

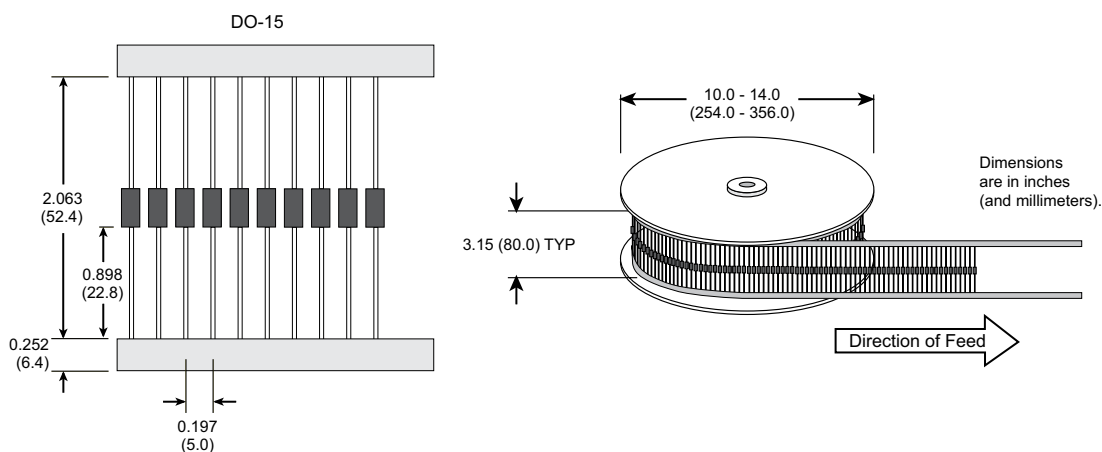
Packing Options

Part Number	Package	Packing Mode	Base Quantity
Kxxx1GL	DO-15	Bulk	1000
Kxxx1GLRP		Tape & Reel	5000

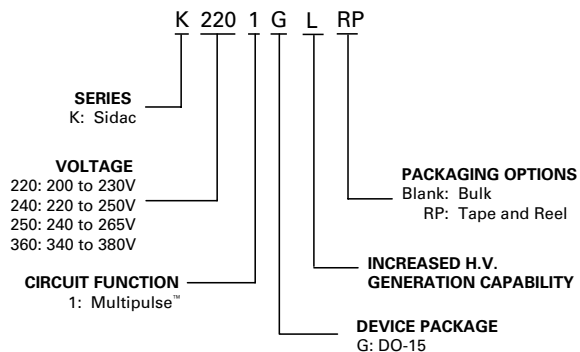
Note: xxx = voltage

DO-15 Embossed Carrier RP Specifications

Meets all EIA RS-29-6 Standards



Part Numbering System



Part Marking System

