ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE6415 thru NTE6419
Bidirectional Thyristor Diodes (SIDAC)

Description:

The NTE6415 through NTE6419 SIDAC devices are silicon bilateral voltage triggered switches with greater power handling capabilities than standard DIACs. Upon application of a voltage exceeding the SIDAC breakover voltage point, the SIDAC switches on through a negative resistance region to a low on–state voltage. Conduction will continue until the current is interrupted or drops below the minimum holding current of the device.

Features:

- Especially Effective in AC Circuits
- Switching Function Directly with the AC Power Line
- Applicable for Various Pulse Generators

Applications:

- High Voltage Lamp Ignitors
- Natural Gas Ignitors
- Gas Oil Ignitors
- High Voltage Power Supplies
- Xenon Ignitors
- Overvoltage Protection
- Pulse generators
- Fluorescent Lighting Ignitors

Absolute Maximum Ratings:

Peak Off Voltage, V_{DRM}
- NTE6415, NTE6416 . . . . . 45V
- NTE6417, NTE6418, NTE6419 . . . . . 90V

Effective Current (T_A = +40°C, 50Hz, Sine Wave, Conducting Angle = 180°), I_T 1A
Surge Current (50Hz, Non–Repeated 1 Cycle Sine wave, Peak Value), I_{TSM} 13A
Peak Current (T_A = +40°C, Pulse Width = 10μs, f = 1kHz), I_{TRM} 20A
Current Rise Rate, di/dt 50A/μs
Maximum Operating Junction Temperature, T_J . . . . . +125°C
Storage Temperature Range, T_{stg} . . . . . –30° to +125°C
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 15°C/W
Lead Temperature (During Soldering, 5mm from case, 5sec max), T_L . . . . . +250°C

Electrical Characteristics: (T_C = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Breakover Voltage NTE6415	V_{BO}	50Hz Sine wave, I_B = 0	45	–	60	V
NTE6416			55	–	65	V
NTE6417			95	–	113	V
NTE6418			104	–	118	V
NTE6419			110	–	125	V
Peak Off Current	I_{DRM}	50Hz Sine Wave, V = Rated V_{DRM}	–	–	10	μA
Breakover Current	I_{BO}	50Hz Sine Wave	–	–	0.5	mA
Holding Current	I_H	50Hz Sine Wave	–	50	–	mA
ON Voltage	V_T	I_T = 1A	–	–	1.5	V
Switching Resistance	R_S	50Hz Sine Wave	0.1	–	–	kΩ