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NTE6407, NTE6408, NTE6411, NTE6412
Bilateral Trigger Diodes (DIACS)

Description:

The NTE6407 thru NTE6412 are bilateral trigger DIACs offering a range of voltage characteristics from 28V to 63V. These devices are triggered from a blocking–to–conduction state for either polarity of applied voltage whenever the amplitude of applied voltage exceeds the breakover voltage rating of the DIAC.

Features:

- Glass–Chip Passivation
- DO35 Type Trigger Package
- Wide Voltage Range Selection

Absolute Maximum Ratings:

Maximum Trigger Firing Capacitance 0.1μF
Device Dissipation (T_A = –40° to +40°C), P_D 250mW
Derate Above +40°C . . . . . 3.6mW/°C
Operating Junction Temperature Range, T_j . . . . . –40° to +125°C
Storage Temperature Range, T_{stg} . . . . . –40° to +125°C
Thermal Resistance, Junction–to–Ambient, R_{thJA} . . . . . 278°C/W
Thermal Resistance, Junction–to–Lead (Note 1), R_{thJL} . . . . . 100°C/W
Lead Temperature (During Soldering, 1/16” (1.59mm) from case, 10sec max), T_L . . . . . +230°C

Note 1. Based on maximum lead temperature of +85°C at ≤ 250mW.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Breakover Voltage (Forward and Reverse) NTE6407	V_{BO}		24	28	32	V
NTE6408			28	32	36	V
NTE6411			35	40	45	V
NTE6412			56	63	70	V
Breakover Voltage Symmetry NTE6407, NTE6408	ΔV_{BO}	Note 2	–	–	2	V
NTE6411			–	–	3	V
NTE6412			–	–	4	V

Note 2. $\Delta V_{BO} = [\ |+V_{BO}| - |-V_{BO}|\ ]$.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Dynamic Breakback Voltage NTE6407, NTE6408	V_{BB}	|ΔV±|, at 10mA, Note 3	7	–	–	V
NTE6411		|ΔV±|, Note 3	10	–	–	V
NTE6412			20	–	–	V
Peak Breakover Current	I_{BO}	At Breakover Voltage	–	–	25	μA
Peak Pulse Current NTE6407, NTE6408, NTE6411	I_{TRM}	For 10μs, 120PPs, $T_A \le +40°C$	–	–	2.0	A
NTE6412			–	–	1.5	A

Note 3. Typical switching time is 900ns measured at I_{PK}.