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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 0.1 μ F
 Device Dissipation ($T_A = -40^\circ$ to $+40^\circ\text{C}$), P_D 250mW
 Derate Above $+40^\circ\text{C}$ 3.6mW/ $^\circ\text{C}$
 Operating Junction Temperature Range, T_j -40° to $+125^\circ\text{C}$
 Storage Temperature Range, T_{stg} -40° to $+125^\circ\text{C}$
 Thermal Resistance, Junction-to-Ambient, R_{thJA} 278 $^\circ\text{C}/\text{W}$
 Thermal Resistance, Junction-to-Lead (Note 1), R_{thJL} 100 $^\circ\text{C}/\text{W}$
 Lead Temperature (During Soldering, 1/16" (1.59mm) from case, 10sec max), T_L $+230^\circ\text{C}$

Note 1. Based on maximum lead temperature of $+85^\circ\text{C}$ at $\leq 250\text{mW}$.

Electrical Characteristics: ($T_C = +25^\circ\text{C}$ unless otherwise specified)

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

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

Electrical Characteristics (Cont'd): ($T_C = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Dynamic Breakback Voltage NTE6407, NTE6408	V_{BB}	$ \Delta V_{\pm} $, at 10mA, Note 3	7	-	-	V
NTE6411		$ \Delta V_{\pm} $, 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 $10\mu\text{s}$, 120PPs, $T_A \leq +40^\circ\text{C}$	-	-	2.0	A
NTE6412			-	-	1.5	A

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

