



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

## NTE6401 Unijunction Transistor

**Description:**

The NTE6401 is designed for use in pulse and timing circuits, sensing circuits and thyristor trigger circuits.

**Features:**

- Low Peak Point Current: 5μA (Max)
- Low Emitter Reverse Current: .005μA (Typ)
- Passivated Surface for Reliability & Uniformity

**Absolute Maximum Ratings:** (T<sub>A</sub> = +25°C unless otherwise specified)

Power Dissipation (Note 1), P <sub>D</sub> .....	300mW
RMS Emitter Current, I <sub>E(RMS)</sub> .....	50mA
Peak Pulse Emitter Current (Note 2), i <sub>E</sub> .....	2A
Emitter Reverse Voltage, V <sub>B2E</sub> .....	30V
Interbase Voltage, V <sub>B2B1</sub> .....	35V
Operating Junction Temperature Range, T <sub>J</sub> .....	-65° to 125°C
Storage Temperature Range, T <sub>stg</sub> .....	-65° to +150°C

Note 1 Derate 3mW/°C increase in ambient temperature. The total power dissipation (available power to Emitter and Base-Two) must be limited by the external circuitry.

Note 2 Capacitor discharge – 10μF or less, 30 volts or less

**Electrical Characteristics:** (T<sub>A</sub> = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Intrinsic Standoff Ratio	η	V <sub>B2B1</sub> = 10V, Note 3	0.56	–	0.75	–
Interbase Resistance	r <sub>BB</sub>	V <sub>B2B1</sub> = 3V, I <sub>E</sub> = 0	4.7	7.0	9.1	kΩ
Interbase Resistance Temperature Coefficient	αr <sub>BB</sub>		0.1	–	0.9	%/°C

Note 3. Intrinsic standoff ratio, η is defined by equation:

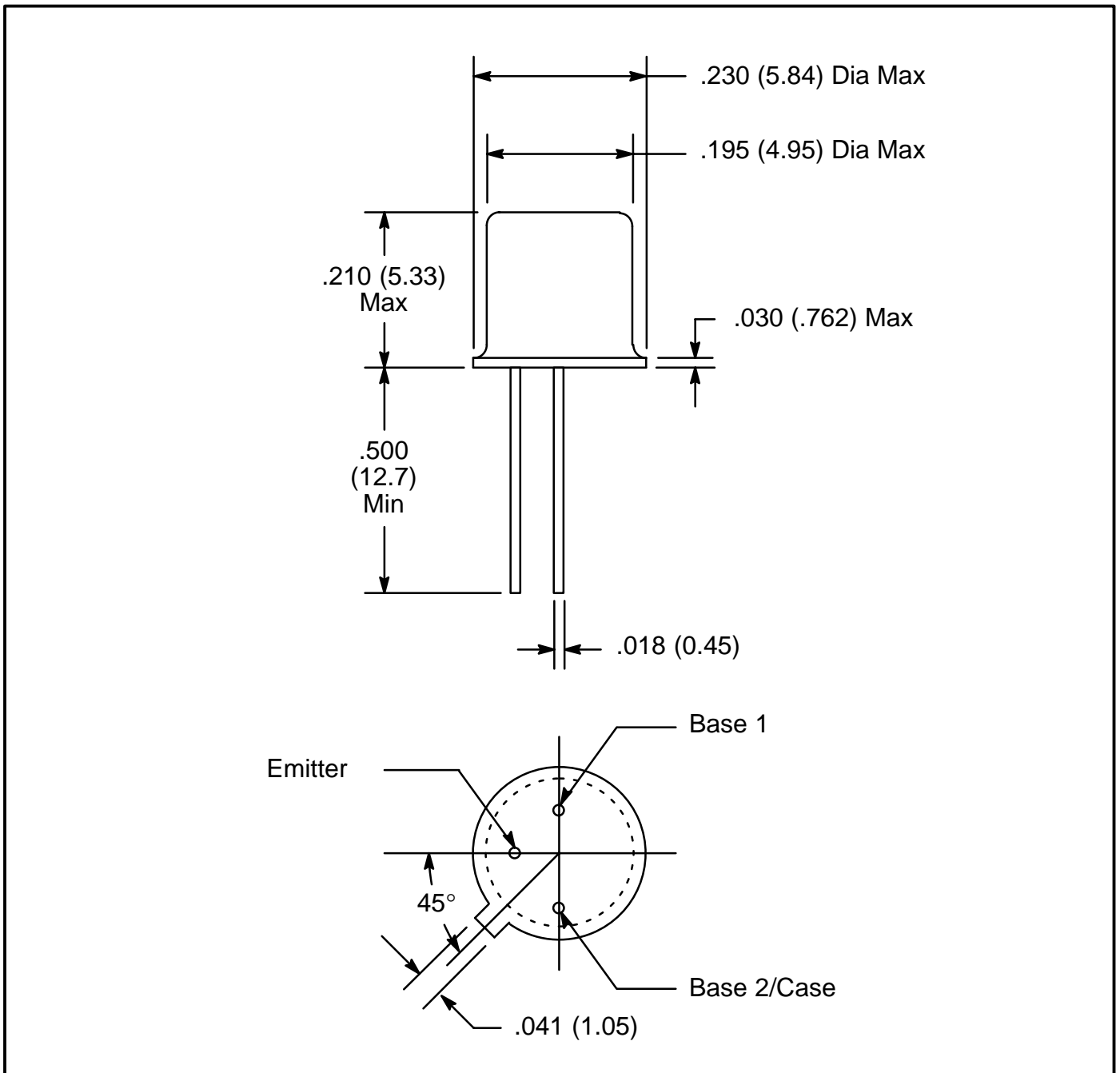
$$\eta = \frac{V_P - V_F}{V_{B2B1}}$$

where V<sub>P</sub> = Peak Point Emitter Voltage  
 V<sub>B2B1</sub> = Interbase Voltage  
 V<sub>F</sub> = Emitter to Base-One Junction Diode Drop (~ 0.45V @ 10μA)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Emitter Saturation Voltage	$V_{EB1(sat)}$	$V_{B2B1} = 10\text{V}, I_E = 50\text{mA}$ , Note 4	–	3.5	–	V
Modulated Interbase Current	$I_{B2(mod)}$	$V_{B2B1} = 10\text{V}, I_E = 50\text{mA}$	–	15	–	mA
Emitter Reverse Current	$I_{EB20}$	$V_{B2E} = 30\text{V}, I_{B1} = 0$	–	0.005	12	$\mu\text{A}$
Peak Point Emitter Current	$I_P$	$V_{B2B1} = 25\text{V}$	–	1	5	$\mu\text{A}$
Valley Point Current	$I_V$	$V_{B2B1} = 20\text{V}, R_{B2} = 100\Omega$	4	6	–	mA
Base–One Peak Pulse Voltage	$V_{OB1}$		3	5	–	V

Note 4. Use pulse techniques: Pulse Width ~ 300 $\mu\text{s}$ , duty cycle  $\leq 2\%$  to avoid internal heating due to interbase modulation which may result in erroneous readings.



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [MOSFET](#) category:*

*Click to view products by [NTE](#) manufacturer:*

Other Similar products are found below :

[614233C](#) [648584F](#) [MCH3443-TL-E](#) [MCH6422-TL-E](#) [FDPF9N50NZ](#) [FW216A-TL-2W](#) [FW231A-TL-E](#) [APT5010JVR](#) [NTNS3A92PZT5G](#)  
[IRF100S201](#) [JANTX2N5237](#) [2SK2464-TL-E](#) [2SK3818-DL-E](#) [FCA20N60\\_F109](#) [FDZ595PZ](#) [STD6600NT4G](#) [FSS804-TL-E](#) [2SJ277-DL-E](#)  
[2SK1691-DL-E](#) [2SK2545\(Q,T\)](#) [405094E](#) [423220D](#) [MCH6646-TL-E](#) [TPCC8103,L1Q\(CM](#) [367-8430-0972-503](#) [VN1206L](#) [424134F](#)  
[026935X](#) [051075F](#) [SBVS138LT1G](#) [614234A](#) [715780A](#) [NTNS3166NZT5G](#) [751625C](#) [873612G](#) [IRF7380TRHR](#) [IPS70R2K0CEAKMA1](#)  
[RJK60S3DPP-E0#T2](#) [RJK60S5DPK-M0#T0](#) [APT5010JVFR](#) [APT12031JFLL](#) [APT12040JVR](#) [DMN3404LQ-7](#) [NTE6400](#) [JANTX2N6796U](#)  
[JANTX2N6784U](#) [JANTXV2N5416U4](#) [SQM110N05-06L-GE3](#) [SIHF35N60E-GE3](#) [2SK2614\(TE16L1,Q\)](#)