



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE2659 (NPN) & NTE2660 (PNP) Silicon Complementary Transistors Medium Power

Features:

- Low Saturation Voltage

Applications:

- Motor Driver
- DC-to-DC Converters

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Collector-Base Voltage, V_{CBO}	35V
Collector-Emitter Voltage, V_{CEO}	25V
Emitter-Base Voltage, V_{EBO}	5V
Peak Pulse Current, I_{CM}	6A
Continuous Collector Current, I_C	2A
Collector Power Dissipation ($T_A = +25^\circ\text{C}$), P_{tot}	1W
Derate above $+25^\circ\text{C}$	5.7mW/ $^\circ\text{C}$
Operating Temperature Range, T_{opr}	-55° to $+200^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+200^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient, R_{thJA1}	175 $^\circ\text{C}/\text{W}$
Thermal Resistance, Junction-to-Ambient (Note 1), R_{thJA2}	116 $^\circ\text{C}/\text{W}$
Thermal Resistance, Junction-to-Case, R_{thJC}	70 $^\circ\text{C}/\text{W}$

Note 1. Device mounted on P.C.B. with copper equal to 1sq. Inch minimum

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

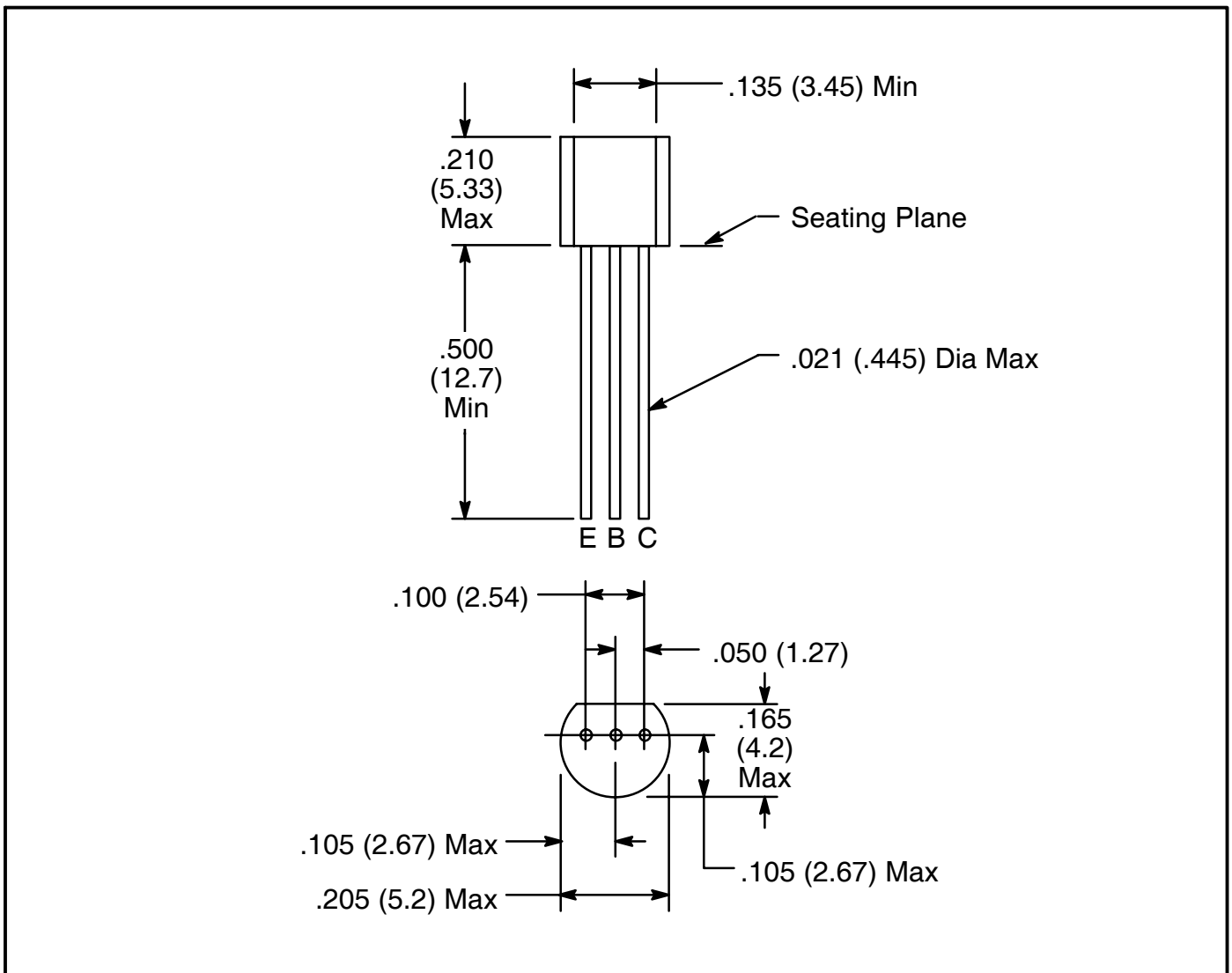
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}$	35	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}$, Note 2	25	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}$	5	-	-	V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = 30\text{V}$	-	-	0.1	μA
		$V_{CB} = 30\text{V}$, $T_A = +100^\circ\text{C}$	-	-	10	
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 4\text{V}$	-	-	0.1	μA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1\text{A}$, $I_B = 100\text{mA}$, Note 2	-	0.12	0.3	V
		$I_C = 2\text{A}$, $I_B = 200\text{mA}$, Note 2	-	0.23	0.5	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 1\text{A}$, $I_B = 100\text{mA}$, Note 2	-	0.9	1.25	V
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	$I_C = 1\text{A}$, $V_{CE} = 2\text{V}$, Note 2	-	0.8	1	V

Note 2. Measured under pulsed conditions: Pulse Width = 300 μs , Duty Cycle $\leq 2\%$.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Forward Current Transfer Ratio	h_{FE}	$I_C = 50\text{mA}, V_{CE} = 2\text{V}, \text{Note 2}$	70	200	-	
		$I_C = 1\text{A}, V_{CE} = 2\text{V}, \text{Note 2}$	100	200	300	
		$I_C = 2\text{A}, V_{CE} = 2\text{V}, \text{Note 2}$	75	150	-	
		$I_C = 6\text{A}, V_{CE} = 2\text{V}, \text{Note 2}$	15	50	-	
Transition Frequency NTE2659	f_T	$I_C = 100\text{mA}, V_{CE} = 5\text{V}, f = 100\text{MHz}$	150	240	-	MHz
NTE2660			100	160	-	
Output Capacitance NTE2659	C_{obo}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	-	25	50	pF
NTE2660		$I_C = 100\text{mA}, V_{CE} = 5\text{V}, f = 100\text{MHz}$	-	55	100	
Switching Times NTE2659	t_{on}	$I_C = 500\text{mA}, V_{CC} = 10\text{V}, I_{B1}=I_{B2}=50\text{mA}$	-	55	-	ns
	t_{off}		-	300	-	
	t_{on}		-	40	-	ns
NTE2660	t_{off}		-	450	-	

Note 2. Measured under pulsed conditions: Pulse Width = $300\mu\text{s}$, Duty Cycle $\leq 2\%$.



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bipolar Transistors - BJT category](#):

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

Other Similar products are found below :

[619691C](#) [MCH4017-TL-H](#) [MJ15024/WS](#) [MJ15025/WS](#) [BC546/116](#) [BC556/FSC](#) [BC557/116](#) [BSW67A](#) [HN7G01FU-A\(T5L,F,T](#)
[NJVMJD148T4G](#) [NSVMMBT6520LT1G](#) [NTE187A](#) [NTE195A](#) [NTE2302](#) [NTE2330](#) [NTE2353](#) [NTE316](#) [IMX9T110](#) [NTE63](#) [NTE65](#)
[C4460](#) [SBC846BLT3G](#) [2SA1419T-TD-H](#) [2SA1721-O\(TE85L,F\)](#) [2SA1727TLP](#) [2SA2126-E](#) [2SB1202T-TL-E](#) [2SB1204S-TL-E](#) [2SC5488A-](#)
[TL-H](#) [2SD2150T100R](#) [SP000011176](#) [FMC5AT148](#) [2N2369ADCSM](#) [2SB1202S-TL-E](#) [2SC2412KT146S](#) [2SC4618TLN](#) [2SC5490A-TL-H](#)
[2SD1816S-TL-E](#) [2SD1816T-TL-E](#) [CMXT2207 TR](#) [CPH6501-TL-E](#) [MCH4021-TL-E](#) [BC557B](#) [TTC012\(Q\)](#) [BULD128DT4](#) [JANTX2N3810](#)
[Jantx2N5416](#) [US6T6TR](#) [KSF350](#) [068071B](#)