

## NTE31 (NPN) & NTE32 (PNP) Silicon Complementary Transistors TV Sound Output, TV Vertical Output, AF Driver Output

### Features:

- High Voltage:  $V_{CEO} = 160V$
- High Continuous Collector Current Capability

### Applications:

- Vertical Deflection Output & Sound Output Applications for Line Operated TV

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

Collector–Base Voltage, $V_{CBO}$ .....	160V
Collector–Emitter Voltage, $V_{CEO}$ .....	160V
Emitter–Base Voltage, $V_{EBO}$ .....	6V
Collector Current, $I_C$ .....	1A
Base Current, $I_B$ .....	500mA
Collector Power Dissipation, $P_C$ .....	900mW
Junction Temperature, $T_J$ .....	+150°C
Storage Temperature Range, $T_{stg}$ .....	–55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	160	–	–	V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 150V, I_E = 0$	–	–	1.0	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 6V, I_C = 0$	–	–	1.0	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 200mA$	100	–	200	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$	–	–	1.5	V
Base–Emitter Voltage	$V_{BE}$	$V_{CE} = 5V, I_C = 5mA$	0.45	–	0.75	V
Transition Frequency						
NTE31	f <sub>T</sub>	$V_{CE} = 5V, I_C = 200mA$	20	100	–	MHz
NTE32			15	50	–	MHz
Collector Output Capacitance						
NTE31	C <sub>ob</sub>	$V_{CB} = 10V, I_E = 0, f = 1MHz$	–	–	20	pF
NTE32			–	–	35	pF

