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NTE89 Silicon NPN Transistor Color TV Horizontal Output w/Internal Damper Diode

Features:

- Color TV Horizontal Output Applications
- High Voltage: $V_{CBO} = 1500V$
- Low Saturation Voltage: $V_{CE(sat)} = 5V$ Max ($I_C = 5A, I_B = 1A$)
- High Speed: $t_f = 1.0\mu s$ Max
- Built-In Damper Diode
- Glass Passivated Collector-Base Junction

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

Collector-Base Voltage, V_{CBO}	1500V
Collector-Emitter Voltage, V_{CEO}	600V
Emitter-Base Voltage, V_{EBO}	5V
Continuous Collector Current, I_C	6A
Emitter Current, I_E	-6A
Collector Power Dissipation ($T_C = +25^\circ C$), P_C	50W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-65° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 500V, I_E = 0$	-	-	10	μA
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 200mA, I_C = 0$	5	-	-	V
DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 1A$	8	12	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 1A$	-	3	5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5A, I_B = 1A$	-	-	1.5	V
Forward Voltage (Damper Diode)	$-V_F$	$I_F = 6A$	-	1.6	2.0	V
Transition Frequency	f_T	$V_{CE} = 10V, I_C = 100mA$	-	3	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	-	165	-	pF
Fall Time	t_f	$I_{CP} = 5A, I_{B1(end)} = 1A$	-	0.5	1.0	μs

