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NTE152 (NPN) & NTE153 (PNP) Silicon Complementary Transistors Audio Power Amplifier, Switch TO-220 Type Package

Description:

The NTE152 (NPN) and NTE153 (PNP) are silicon complementary transistors in a standard TO-220 type package designed for general purpose medium power switching and amplifier applications.

Features:

- Good Linearity of h_{FE}

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

Collector-Base Voltage, V_{CBO}	90V
Collector-Emitter Voltage, V_{CEO}	90V
Emitter-Base Voltage, V_{EBO}	5V
Collector Current, I_C	4A
Emitter Current, I_E	-4A
Base Current, I_B	3A
Collector Power Dissipation ($T_C = +25^\circ\text{C}$), P_C	40W
Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-55° to +150°C

Note 1. NTE152MP is a matched pair of NTE152 with their DC Current Gain (h_{FE}) matched to within 10% of each other.

Note 2. Matched complementary pairs are available upon request (NTE55MCP). Matched complementary pairs have their gain specification (h_{FE}) matched to within 10% of each other.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 50\text{mA}, I_B = 0$	90	-	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 90\text{V}, I_E = 0$	-	-	20	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	-	-	10	μA
DC Current Gain	h_{FE1}	$V_{CE} = 5\text{V}, I_C = 0.5\text{A}$	40	-	200	
	h_{FE2}	$V_{CE} = 5\text{V}, I_C = 3\text{A}$	15	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3\text{A}, I_B = 0.3\text{A}$	-	-	1.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = 5\text{V}, I_C = 3\text{A}$	-	-	1.5	V
Transition Frequency	f_T	$V_{CE} = 5\text{V}, I_C = 0.5\text{A}$	3	8	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	-	85	-	pF

