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NTE2418 (NPN) & NTE2419 (PNP) Silicon Complementary Transistors Digital ^{w/2} Built-In Bias 47k Resistors (Surface Mount)

Features:

- Built-In Bias Resistors
- Small SOT-23 Surface Mount Package

Applications:

- Switching Circuits
- Inverters
- Interface Circuits
- Driver

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

Collector-Base Voltage, V_{CBO}	50V
Collector-Emitter Voltage, V_{CEO}	50V
Emitter-Base Voltage, V_{EBO}	10V
Collector Current, I_C	
Continuous	100mA
Peak	200mA
Collector Dissipation, P_C	200mW
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Collector Cutoff Current	I_{CBO}	$V_{CB} = 40V, I_E = 0$	-	-	0.1	μA	
	I_{CEO}	$V_{CE} = 40V, I_B = 0$	-	-	0.5	μA	
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	30	53	80	μA	
DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 10mA$	50	-	-		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	50	-	-	V	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 100\mu A, R_{BE} = \infty$	50	-	-	V	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5mA, I_B = 0.25mA$	-	0.1	0.3	V	
Current Gain-Bandwidth Product	f_T	$V_{CE} = 10V, I_C = 5mA$	NTE2418	-	250	-	MHz
			NTE2419	-	200	-	MHz

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Capacitance NTE2418	C_{ob}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	-	3.5	-	pF
NTE2419			-	5.3	-	pF
Input OFF Voltage	$V_{I(off)}$	$V_{CE} = 5\text{V}, I_C = 100\mu\text{A}$	0.8	1.1	1.5	V
Input ON Voltage	$V_{I(on)}$	$V_{CE} = 0.2\text{V}, I_C = 10\text{mA}$	1.0	2.5	5.0	V
Input Resistance	R_1		32	47	62	k Ω
Input Resistance Ratio	R_1/R_2		0.9	1.0	1.1	

