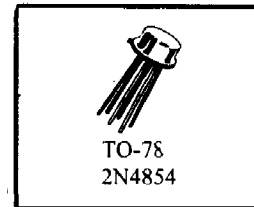


2N4854

NPN/PNP SILICON COMPLEMENTARY SMALL SIGNAL DUAL TRANSISTOR

MAXIMUM RATINGS

Ratings	Sym	2N4854		Unit
Collector-Emitter Voltage	V_{CEO}	40		Vdc
Collector-Base Voltage	V_{CBO}	60		Vdc
Emitter-Base Voltage	V_{EBO}	5.0		Vdc
Collector Current	I_C	600		mAdc
		One Trans	Total Device	
Total Power Dissipation @ $T_A = +25^{\circ}C$ @ $T_C = +25^{\circ}C^{(1)}$	P_T	0.30 ⁽³⁾ 1.0 ⁽⁵⁾	0.60 2.0	W W
Operating & Storage Junction Temp. Range	T_J	200		$^{\circ}C$
Operating & Storage Junction Temp. Range	T_{stg}	-55 to +200		$^{\circ}C$
Lead to Case Voltage		± 120		Vdc



ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS				
Forward-Current Transfer Ratio $I_C = 150 \text{ mAdc}, V_{CE} = 1 \text{ Vdc}$ $I_C = 100 \text{ } \mu\text{Adc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 1.0 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 10 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 150 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 300 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$	h_{FE}	50 35 50 75 100 35	300	
Collector-Emitter Saturation Voltage $I_C = 150 \text{ mAdc}, I_B = 15 \text{ mAdc}$	$V_{CE(sat)}$		0.40	Vdc
Base-Emitter Saturation Voltage $I_C = 150 \text{ mAdc}, I_B = 15 \text{ mAdc}$	$V_{BE(sat)}$	0.80	1.25	Vdc

DYNAMIC CHARACTERISTICS

Forward Current Transfer Ratio $I_C = 1.0 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}$	h_{fe}	60	300	
Forward Current Transfer Ratio, Magnitude $I_C = 20 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 100 \text{ MHz}$	$ h_{fc} $	2.0	10	
Small-Signal Common Emitter Input Impedance $I_C = 1.0 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}$	h_{ie}	1.5	9.0	$k\Omega$
Small-Signal Common Emitter Output Admittance $I_C = 1.0 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}$	h_{oe}		50	μhmo
Output Capacitance $V_{CB} = 10 \text{ Vdc}, I_E = 0, 100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$	C_{obo}		8.0	pF
Noise Figure $I_C = 100 \text{ } \mu\text{Adc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}, R_G = 1.0 \text{ k}\Omega$	NF		8.0	dB



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