

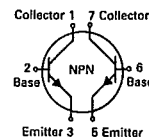
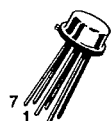
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	15	Vdc
Collector-Emitter Voltage	V_{CER}	20	Vdc
Collector-Base Voltage	V_{CBO}	40	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
		One Die	Both Die
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	0.3 1.72	0.4 2.28 Watt mW/°C
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	0.75 4.3	1.5 8.55 Watts mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	°C

T-31-27

2N3425

CASE 654-07, STYLE 1

**DUAL
AMPLIFIER TRANSISTORS**

NPN SILICON

Refer to MD2369,A,B for graphs.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage(1) ($I_C = 30 \text{ mAdc}$, $R_{BE} \leq 10 \text{ ohms}$)	$V_{CER(sus)}$	20	—	Vdc
Collector-Emitter Sustaining Voltage(1) ($I_C = 10 \text{ mAdc}$, $I_B = 0$)	$V_{CEO(sus)}$	15	—	Vdc
Collector-Base Breakdown Voltage ($I_C = 10 \mu\text{Adc}$, $I_E = 0$)	$V_{(BR)CBO}$	40	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 10 \mu\text{Adc}$, $I_C = 0$)	$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current ($V_{CE} = 20 \text{ Vdc}$, $V_{EB(off)} = 0.25 \text{ Vdc}$, $T_A = 125^\circ\text{C}$)	I_{CEX}	—	15	μAdc
Collector Cutoff Current ($V_{CB} = 20 \text{ Vdc}$, $I_E = 0$)	I_{CBO}	—	0.025	μAdc
		—	15	μAdc
Emitter Cutoff Current ($V_{EB} = 4.0 \text{ Vdc}$, $I_C = 0$)	I_{EBO}	—	0.2	μAdc
ON CHARACTERISTICS				
DC Current Gain ($I_C = 0.5 \text{ mAdc}$, $V_{CE} = 1.0 \text{ Vdc}$) ($I_C = 10 \text{ mAdc}$, $V_{CE} = 1.0 \text{ Vdc}$) ($I_C = 10 \text{ mAdc}$, $V_{CE} = 1.0 \text{ Vdc}$, $T_A = -55^\circ\text{C}$)	h_{FE}	12 30 12	— 120 —	—
Collector-Emitter Saturation Voltage ($I_C = 10 \text{ mAdc}$, $I_B = 1.0 \text{ mAdc}$) ($I_C = 7.0 \text{ mAdc}$, $I_B = 0.7 \text{ mAdc}$, $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$)	$V_{CE(sat)}$	— —	0.4 0.5	Vdc
Base-Emitter Saturation Voltage ($I_C = 10 \text{ mAdc}$, $I_B = 1.0 \text{ mAdc}$) ($I_C = 7.0 \text{ mAdc}$, $I_B = 0.7 \text{ mAdc}$, $T_A = -55^\circ\text{C}$)	$V_{BE(sat)}$	0.7 —	0.85 0.9	Vdc
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain — Bandwidth Product ($I_C = 20 \text{ mAdc}$, $V_{CE} = 10 \text{ Vdc}$, $f = 100 \text{ MHz}$)	f_T	300	—	MHz
Output Capacitance ($V_{CB} = 10 \text{ Vdc}$, $I_E = 0$, $f = 140 \text{ kHz}$)	C_{obo}	—	6.0	pF
Input Capacitance ($V_{BE} = 0.5 \text{ Vdc}$, $I_C = 0$, $f = 140 \text{ kHz}$)	C_{ibo}	—	9.0	pF
Small-Signal Current Gain ($I_C = 10 \text{ mAdc}$, $V_{CE} = 1.0 \text{ Vdc}$, $f = 1.0 \text{ kHz}$)	h_{fe}	20	—	—
Real Part of Input Impedance ($I_C = 10 \text{ mAdc}$, $V_{CE} = 10 \text{ Vdc}$, $f = 300 \text{ MHz}$)	$\text{Re}(h_{ie})$	—	50	Ohms
SWITCHING CHARACTERISTICS				
Storage Time ($I_C = 10 \text{ mAdc}$, $I_{B1} = 10 \text{ mAdc}$, $I_{B2} = 10 \text{ mAdc}$)	t_s	—	40	ns
Turn-On Time ($V_{CC} = 3.0 \text{ Vdc}$, $V_{EB(off)} = 2.0 \text{ Vdc}$, $I_C = 10 \text{ mAdc}$, $I_{B1} = 3.0 \text{ mAdc}$)	t_{on}	—	50	ns
Turn-Off Time ($V_{CC} = 3.0 \text{ Vdc}$, $I_C = 10 \text{ mAdc}$, $I_{B1} = 3.0 \text{ mAdc}$, $I_{B2} = 1.0 \text{ mAdc}$)	t_{off}	—	90	ns

(1) Pulse Test: Pulse Width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 1.0\%$.