



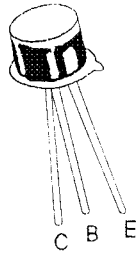
SOLID STATE INC.

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NPN SILICON TRANSISTORS

2N6430, 6431



TO-18
Metal Can Package

General Purpose Transistors.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C unless specified otherwise)

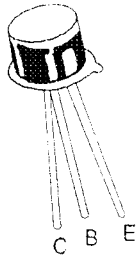
DESCRIPTION	SYMBOL	2N6430	2N6431	UNIT
Collector Emitter Voltage	V_{CEO}	200	300	V
Collector Base Voltage	V_{CBO}	200	300	V
Emitter Base Voltage	V_{EBO}		6	V
Collector Current Continuous	I_C		50	mA
Total Device Dissipation @Ta=25°C	P_D		500	mW
Derate Above 25°C			2.86	mW/°C
Total Device Dissipation @ Tc=25°C	P_D		1.8	W
Derate Above 25°C			10.3	mW/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}		-65 to +200	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	VALUE			UNIT	
			MIN	TYP	MAX		
Collector Emitter Breakdown Voltage	BV_{CEO}^*	$I_C=1.0mA, I_B=0$					
			2N6430	200			V
			2N6431	300			V
Collector Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$					
			2N6430	200			V
			2N6431	300			V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu A, I_C=0$	6.0			V	
Collector Cut off Current	I_{CBO}	$V_{CB}=160V, I_E=0$			100	nA	
			2N6430				
			2N6431			100	nA
Emitter Cut off Current	I_{EBO}	$V_{EB}=4V, I_C=0$			100	nA	
			2N6430				
DC Current Gain	h_{FE}	$I_C=1mA, V_{CE}=10V$		25			
					40		
					50		

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ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)

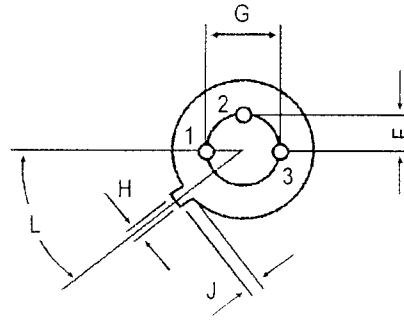
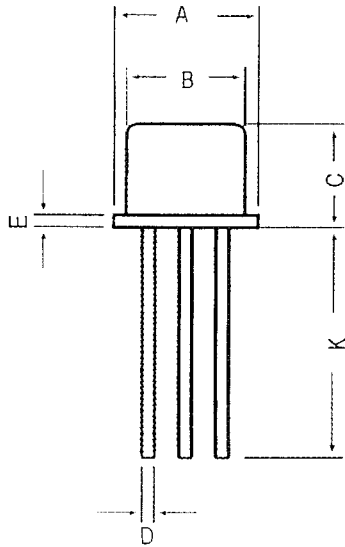
DESCRIPTION	SYMBOL TEST CONDITION	VALUE			
		MIN	TYP	MAX	UNIT
Collector Emitter (sat) Voltage	$V_{CE(sat)}$ $I_C=20mA, I_B=2.0mA$			0.5	V
Base Emitter (sat) Voltage	$V_{BE(sat)}$ $I_C=20mA, I_B=2.0mA$			0.9	V
<u>DYNAMIC CHARACTERISTICS</u>					
Current Gain Bandwidth Product	f_T $I_C=10mA, V_{CE}=20V$ $f=100MHz$	50		500	MHz
Output Capacitance	C_{cb} $V_{CB}=20V, I_E=0$ $f=1MHz$			4.0	pF

*Pulse Condition: Pulse Width =300µs, Duty Cycle =2%

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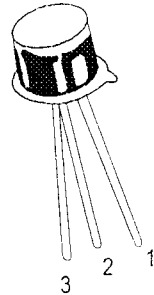
TO-18
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All dimensions in mm.

DIM	MIN	MAX
A	5.24	5.84
B	4.52	4.97
C	4.31	5.33
D	0.40	0.53
E	—	0.76
F	—	1.27
G	—	2.97
H	0.91	1.17
J	0.71	1.21
K	12.70	—
L	45 DEG	



PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR