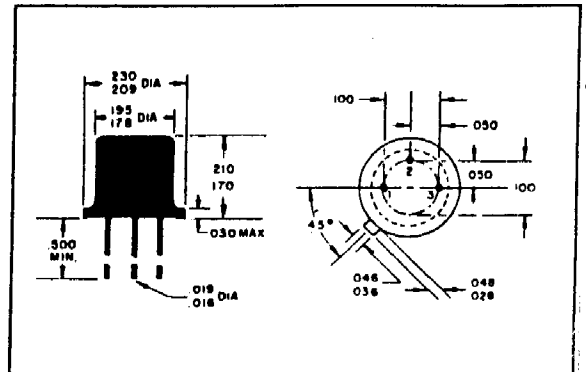


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2N2784

NPN SILICON TRANSISTOR



MECHANICAL DATA

CASE: JEDEC TO-18
 TERMINAL CONNECTIONS:
 Lead 1 Emitter
 Lead 2 Base
 Lead 3 Collector (Electrically connected to case)

ELECTRICAL DATA

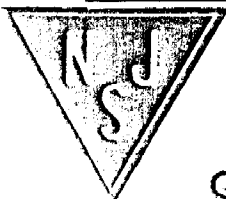
ABSOLUTE MAXIMUM RATINGS:

Collector to Base Voltage V_{CRO}	15 volts
Collector to Emitter Voltage V_{CEO}	6.0 volts
Emitter to Base Voltage V_{EBO}	4.0 volts
Total Device Dissipation	
@ Case Temperature 25° C	0.88 watts
@ Case Temperature 100° C	0.5 watts
@ Free Air Temperature 25° C	0.3 watts
Junction Temperature (Operating)	-65° C to +200° C
Storage Temperature	-65° C to +300° C

ELECTRICAL CHARACTERISTICS: @25° C (unless otherwise noted)

PARAMETER	SYM.	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Collector to Base Breakdown Voltage	BV_{CRO}	$I_C=10 \mu A$	15			volts
Collector to Emitter Breakdown Voltage ▲	BV_{CEO}	$I_C=10 mA$	6.0			volts
Emitter to Base Breakdown Voltage	BV_{EBO}	$I_E=10 \mu A$	4.0			volts
Collector Cutoff Current	I_{CBO}	$V_{CB}=5.0 V$			5.0	nA
Collector Cutoff Current	I_{CRO2}	$V_{CB}=5 V, TA=+150° C$			5.0	μA
Collector Reverse Current	I_{CEX}	$V_{CE}=6.0 V, V_{EB}=0.4 V$			10	nA
Base Current	I_B	$V_{CE}=6.0 V, V_{EB}=0.4 V$			10	nA
DC Current Gain ▲	h_{FE1}	$V_{CE}=0.5 V, I_C=10 mA$	40		120	
DC Current Gain ▲	h_{FE2}	$V_{CE}=1.0 V, I_C=30 mA$	20			
DC Current Gain	h_{FE3}	$V_{CE}=0.5 V, I_C=10 mA, TA=-55° C$	10			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3.0 mA, I_B=0.15 mA$			0.26	volts
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=3.0 mA, I_B=0.15 mA$	0.70		0.85	volts
Collector Capacitance	Cob	$V_{CB}=5 V, I_E=0 mA$			3.0	pf
Input Capacitance	Cib	$V_{FB}=0.5 V, I_C=0 mA$			2.0	pf
High Frequency Current Gain	h_{fe}	$V_{CE}=4.0 V, I_C=5.0 mA, f=100 mc$	10			mc
Charge Storage Time Constant	τ_s	$I_C=I_{R1}=I_{R2}=5.0 mA$ (See Fig. 1)			5.0	nsec
Turn-On Time	t_{on}	$I_C=10 mA, I_{R1}=2.0 mA, I_{R2}=1.0 mA$ (See Fig. 2)			9.0	nsec
Turn-Off Time	t_{off}	$I_C=10 mA, I_{R1}=I_{R2}=1.0 mA$ (See Fig. 2)			9.0	nsec

▲ Measured with 300 μ Sec, 2% duty cycle pulse



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

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