

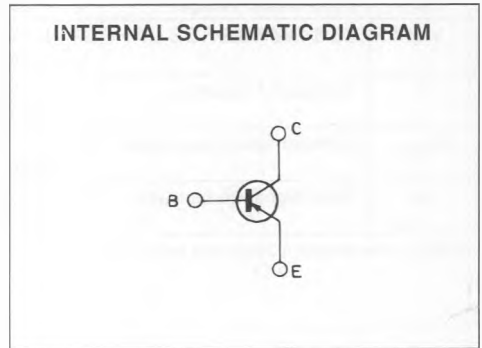
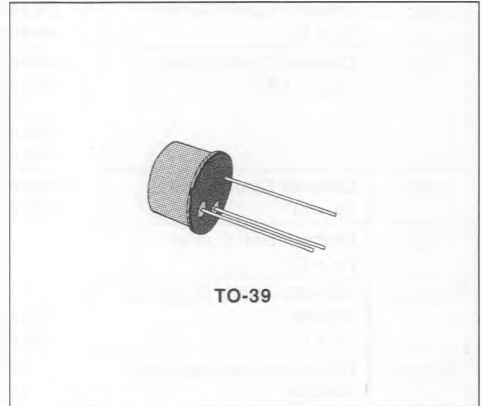


PNP SILICON TRANSISTORS

DESCRIPTION

The 2N5679 and 2N5680 are silicon epitaxial planar PNP transistors in Jedec TO-39 metal case intended for use as drivers for high power transistors in general purpose, amplifier and switching circuit.

The complementary NPN types are the 2N5681 and 2N5682 respectively.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	2N5679	2N5680	Unit
V_{CBO}	Collector-base Voltage ($I_E = 0$)	- 100	- 120	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	- 100	- 120	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)		- 4	V
I_C	Collector Current		- 1	A
I_B	Base Current		- 0.5	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^\circ C$ $T_{amb} \leq 25^\circ C$		10 †	W W
T_{stg}	Storage Temperature		- 65 to 200	$^\circ C$
T_j	Junction Temperature		200	$^\circ C$

THERMAL DATA

$R_{th(j-case)}$	Thermal Resistance Junction-case	Max	17.5	$^{\circ}C/W$
$R_{th(j-amb)}$	Thermal Resistance Junction-ambient	Max	175	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	for 2N5679 $V_{CB} = -100V$ for 2N5680 $V_{CB} = -120V$			-1 -1	μA μA
I_{CEV}	Collector Cutoff Current ($V_{BE} = 1.5V$)	for 2N5679 $V_{CE} = -100V$ for 2N5680 $V_{CE} = -120V$ $T_{case} = 150^{\circ}C$ for 2N5679 $V_{CE} = -100V$ for 2N5680 $V_{CE} = -120V$			-1 -1 -1 -1	μA μA mA mA
I_{CEO}	Collector Cutoff Current ($I_B = 0$)	for 2N5679 $V_{CE} = -70V$ for 2N5680 $V_{CE} = -80V$			-10 -10	μA μA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = -4V$			-1	μA
$V_{CEO(sus)}^*$	Collector-emitter Sustaining Voltage ($I_B = 0$)	$I_C = -10mA$ for 2N5679 for 2N5680	-100 -120			V V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = -250mA$ $I_B = -25mA$ $I_C = -500mA$ $I_B = -50mA$ $I_C = -1A$ $I_B = -200mA$			-0.6 -1 -2	V V V
V_{BE}^*	Base-emitter Voltage	$I_C = -250mA$ $V_{CE} = -2V$			-1	V
h_{FE}^*	DC Current Gain	$I_C = -250mA$ $V_{CE} = -2V$ $I_C = -1A$ $V_{CE} = -2V$	40 5		150	
f_T	Transition Frequency	$I_C = -100mA$ $V_{CE} = -10V$ $f = 10MHz$	30			MHz
C_{CBO}	Collector-base Capacitance	$I_E = 0$ $V_{CB} = -20V$ $f = 1MHz$			50	pF
h_{ie}	Small Signal Current Gain	$I_C = -0.2A$ $V_{CE} = -1.5V$ $f = 1KHz$	40			

* Pulsed : pulse duration = 300us, duty cycle < 2 %.