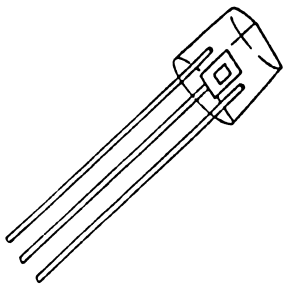
New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

Silicon Transistors

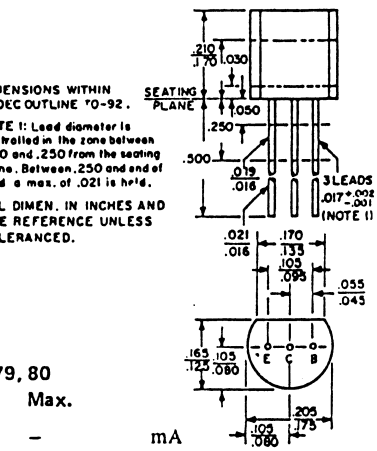
NPN
2N5777-80



absolute maximum ratings: (25°C) (unless otherwise specified)

		2N5777, 79	2N5778, 80	
Voltages—Dark Characteristics				
Collector to Emitter	V_{CEO}	25	40	Volts
Collector to Base	V_{CBO}	25	40	Volts
Emitter to Base	V_{EBO}	8	12	Volts
Current				
Light Current	I_L	250	250	mA
Dissipation				
Power Dissipation*	P_T	200	200	mW
Temperature				
Junction Temperature	T_J	← 100°C →		
Storage Temperature	T_{stg}	← −65°C to +100°C →		

*Derate 2.67mW/°C above 25°C ambient



electrical characteristics: (25°C) (unless otherwise specified)

		2N5777, 78		2N5779, 80		
Static Characteristics		Min.	Max.	Min.	Max.	
Light Current (V_{CE} = 5V, H = 2mW/cm² **)	I_L	0.5	–	2.0	–	mA
Forward Current Transfer Ratio (V_{CE} = 5V, I_C = 0.5mA)	h_{FE}	2.5k	–	5k	–	

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.

		2N5777, 79		2N5778, 80		
		Min.	Max.	Min.	Max.	
Dark Current (V_{CE} = 12V, I_B = 0)	I_D	–	100	–	100	nA
Collector-Emitter Breakdown Voltage (I_C = 10mA, H = 0)	$V_{(BR)CEO}$	25	–	40	–	Volts
Collector-Base Breakdown Voltage (I_C = 100nA, H = 0)	$V_{(BR)CBO}$	25	–	40	–	Volts
Emitter-Base Breakdown Voltage (I_E = 100nA, H = 0)	$V_{(BR)EBO}$	8	–	12	–	Volts

Dynamic Characteristics		2N5777-80 Min.	Typ.	Max.	
Switching Speeds (V_{CE} = 10V, I_L = 10mA, R_L = 100 ohms, GaAs LED source)					
Delay Time	t_d	–	30	100	μsec.
Rise Time	t_r	–	75	250	μsec.
Storage Time	t_s	–	0.5	5	μsec.
Fall Time	t_f	–	45	150	μsec.
Collector-Base Capacitance (V_{CB} = 10V, f = 1MHz)	C_{cb}	–	7.6	10	pF
Emitter-Base Capacitance (V_{EB} = 0.5V, f = 1MHz)	C_{eb}	–	10.5	–	pF
Collector-Emitter Capacitance (V_{CEO} = 10V, f - 1MHz)	C_{ceo}	–	3.4	–	pF

**H = Radiation Flux Density. Radiation source is an unfiltered tungsten filament bulb at 2870°K color temperature.