

Silicon Transistors



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

Voltages—Dark Characteristics

	2N5777, 79	2N5778, 80		
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
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Dissipation

Power Dissipation*	P _T	200	200	mW
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Temperature

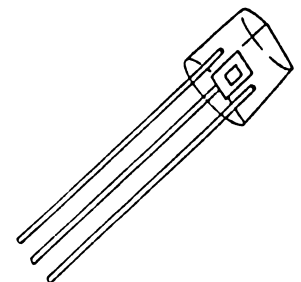
Junction Temperature	T _J	← 100°C →	
Storage Temperature	T _{stg}	← -65°C to +100°C →	

*Derate 2.67mW/°C above 25°C ambient

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

Static Characteristics

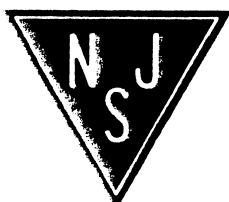
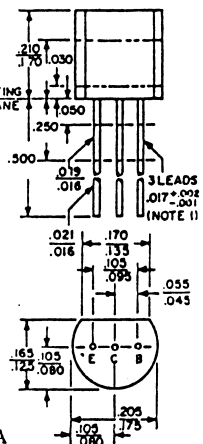
		2N5777, 78		2N5779, 80		
		Min.	Max.	Min.	Max.	
Light Current (V _{CE} = 5V, H = 2mW/cm ² **)	I _L	0.5	—	2.0	—	mA
Forward Current Transfer Ratio (V _{CE} = 5V, I _C = 0.5mA)	h _{FE}	2.5k	—	5k	—	



DIMENSIONS WITHIN JEDEC OUTLINE '0-92.

NOTE 1: Lead diameter is controlled in the zone between .070 and .250 from the seating plane. Between .250 and end of lead a max. of .021 is h/d.

ALL DIMEN. IN INCHES AND ARE REFERENCE UNLESS TOLERANCED.



		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	$\mu sec.$	
Rise Time	t_r	-	75	250	$\mu sec.$	
Storage Time	t_s	-	0.5	5	$\mu sec.$	
Fall Time	t_f	-	45	150	$\mu sec.$	
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.