

Light Detector Planar Silicon Photo-Darlington Amplifier

NPN 2N5777-80

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

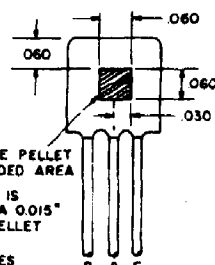
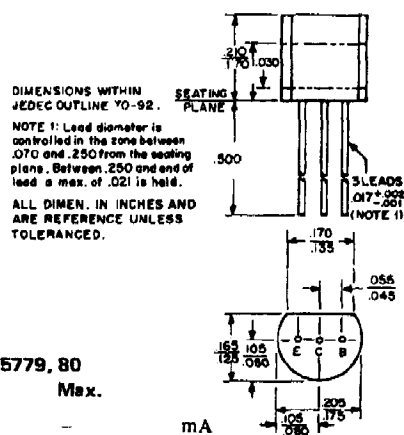
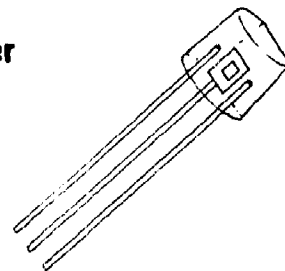
		2N5777, 79 (L14D1,3)	2N5778, 80 (L14D2,4)		
Voltages—Dark Characteristics	Collector to Emitter	V _{CEO}	25	40	Volts
	Collector to Base	V _{CBO}	25	40	Volts
	Emitter to Base	V _{EBO}	8	12	Volts
Current	Light Current	I _L	250	250	mA
Dissipation	Power Dissipation*	P _T	200	200	mW
Temperature	Junction Temperature	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		
		Min.	Max.	Min.	Max.	
Static Characteristics	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 = 2.0mA)	h _{FE}	1.0k	—	2.0k	—
		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 = 100μA, H = 0)	V _{(BR)CBO}	25	—	40	—	Volts
	Emitter-Base Breakdown Voltage (I _E = 100μA, H = 0)	V _{(BR)EBO}	8	—	12	Volts
		2N5777-80				
		Min.	Typ.	Max.		
Dynamic Characteristics	Switching Speeds (V _{CE} = 10V, I _L = 10mA, R _L = 100 ohms, GaAs LED source)	t _d	—	30	100	μsec.
		t _r	—	75	250	μsec.
		t _s	—	0.5	5	μsec.
		t _f	—	45	150	μsec.
		C _{cb}	—	7.6	10	pF
Collector-Base Capacitance (V _{CB} = 10V, f = 1MHz)	C _{cb}	—	10.5	—	—	pF
	C _{ceo}	—	3.4	—	—	pF

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



PELLET LOCATION

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