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NTE3034A Silicon NPN Phototransistor

Features:

- Spectral Range of Sensitivity: 450 to 1100nm (Typ)
- Package: Sidelooker, Epoxy
- High Photosensitivity

Applications:

- A Variety of Manufacturing and Monitoring Applications
- Photointerrupters

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Collector–Emitter Voltage, V_{CE}	30V
Emitter–Collector Voltage, V_{EC}	7V
Collector Current, I_C	50mA
Collector Surge Current ($\tau < 10\mu\text{s}$), I_{CS}	100mA
Total Power Dissipation, P_{tot}	100mW
Operating Temperature Range, T_{opr}	-40° to $+100^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40° to $+100^\circ\text{C}$
Thermal Resistance, Junction–to–Ambient, R_{thJA}	750K/W
ESD Withstand Voltage, V_{ESO}	2000V

Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Wavelength of Maximum Sensitivity	$I_{S \max}$		–	880	–	nm
Radiant Sensitivity Area	A		–	0.11	–	mm^2
Dimensions of Chip Area	L x W		0.55 x .055 (Typ)			mm
Half Angle	φ		–	± 35	–	$^\circ$
Capacitance	C_{CE}	$V_{CE} = 0\text{V}, f = 1\text{MHz}, E = 0$	–	7.5	–	pF
Photocurrent	I_{PCE}	$\lambda = 950\text{nm}, E_o = 0.5\text{mW}/\text{cm}^2, V_{CE} = 5\text{V}$	250	–	–	μA
		$E_V = 1000 \text{ lx, Std. Light A, } V_{CE} = 5\text{V}$	–	3200	–	μA
Dark Current	I_{CEO}	$V_{CE} = 20\text{V}, E = 0$	–	1	50	nA
Rise and Fall Time	t_r, t_f	$I_C = 1\text{mA}, V_{CC} = 5\text{V}, R_L = 1\text{k}\Omega$	–	10	–	μs
Collector–Emitter saturation Voltage	$V_{CE(sat)}$	Threefold Saturated	–	150	–	mV

Rev. 7-19



