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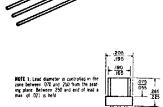
## **Silicon Transistors**

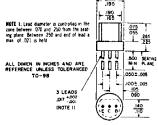


2N5174-2N5176 are NPN silicon planar passivated transistors designed for high voltage applications. They are especially suited for driving high voltage indicating devices. The planar, passivated construction assures excellent device stability and life. These high performance, high value transistors are made possible by advanced manufacturing techniques and epoxy encapsulation.



		2N5174	2N5175, 6	i	
Voltages					
Collector to Emitter Emitter to Base Collector to Base	$egin{array}{c} \mathbf{V_{CEO}} \ \mathbf{V_{ERO}} \ \mathbf{V_{CEO}} \end{array}$	75 5 90	100 5 130	Volts Volts Volts	
Current					
Collector (Steady State)*	Ic	25	25	mA	
Dissipation Total Power (free air @ 25°C)† Total Power (free air @ 55°C)†	$\mathbf{P}_{r}$ $\mathbf{P}_{r}$	360 :260	200 120	mW mW	
Temperature	ГТ	.2.00	120	*** **	
Storage	$\mathbf{T}_{\mathrm{str}}$	-55 to +150°C			
Operating	$\hat{\mathbf{T}}_{j}^{\kappa r}$	-55 to +125℃			
Lead soldering, 1/16" to 1/32" from case for 10 seconds max.	T <sub>1</sub> ,	+260°C			





pF

 $(V_{CB} = 10V, I_E = 0, f = 1 MHz)$ 

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

•					
Static Characteristics			Min.	Max.	
Collector Cutoff Current ( $V_{CB} = 60V$ )		$\mathbf{I}_{\mathrm{CRo}}$	*******	.5	$\mu \mathbf{A}$
Emitter Cutoff Current $(V_{EB} = 5V)$		$I_{EBO}$		100	$\mu \mathbf{A}$
Collector Saturation Voltage ( $I_c = 10 \text{ mA}, I_B = 1 \text{ mA}$ ) ‡		VCEGat		.95	Volts
Base Saturation Voltage $(I_c = 10 \text{ mA}, I_B = 1 \text{ mA})$ ‡		$\mathbf{V}_{\mathrm{BE(sat)}}$	.60	.80	Volts
Base Emitter Voltage ( $I_{ m C} \equiv 10$ mA, $V_{ m CE} \equiv 5{ m V})$ $\ddag$		${f V}_{ m RE}$	.20	.80	Volts
Collector to Emitter Breakdown Voltage ( $I_c=10\ mA$ ) $\ddagger$	2N5174 2N5175 2N5176	V <sub>свюсео</sub>	75 100 100		Volts Volts Volts
Forward Current Transfer Ratio ( $V_{\rm CE} = 5  m V, I_{\rm c} = .1 \ mA)$	2N5174 2N5175 2N5176	$\mathbf{h}_{\mathrm{FE}}$	30 40 100		
$(V_{CE} = 5V, I_C = 10 \ mA)  \ddagger$ $\ddagger$ Pulse test, 300 $\mu sec$ , 2% duty cycle.	2N5174 2N5175 2N5176	$\mathbf{h}_{\mathrm{FE}}$	40 55 140	600 160 300	
Dynamic Characteristics					
Forward Current Transfer Ratio ( $V_{\rm CE} = 5 V$ , $I_{\rm c} = 10$ mA , $f = 1$ kHz	2N5174 2N5175 2N5176	h <sub>fe</sub>	40 55 140	900 240 450	
Output Capacitance, Common Base		_		_	173

 $\mathbf{C}_{\mathrm{cb}}$ 

<sup>\*</sup>Determined from power limitations due to saturation voltage at this current. †Derate 2.67 mW/°C increase for temperature above 25°C.