



NEW ENGLAND SEMICONDUCTOR

**2N5954
2N5955
2N5956**

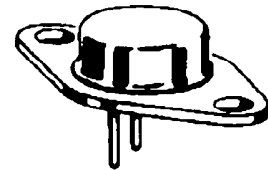
SILICON POWER TRANSISTORS

...General-Purpose Types for Switching Applications
in Military, Industrial and Commercial Equipment.

- COMPLEMENTS TO 2N6372, 2N6273, 2N6274
- LOW SATURATION VOLTAGES
- MAXIMUM-SAFE-AREA-OF-OPERATION CURVES
- THERMAL-CYCLE RATINGS
- HERMETICALLY-SEALED JEDEC TO-66 PACKAGE
- HIGH GAIN AT HIGH

**6.0 AMPERE
MEDIUM-POWER
PNP SILICON TRANSISTOR**

**40, 60, 80 VOLTS
40 WATTS**



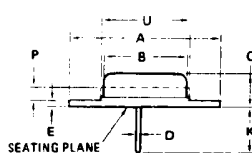
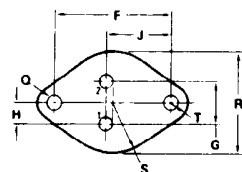
TO-66

MAXIMUM RATINGS

RATINGS*	SYMBOL	2N5954	2N5955	2N5956	UNITS
Collector-Emitter Voltage	V_{CEO}	80	60	40	Vdc
Collector-Base Voltage	V_{CBO}	90	70	50	Vdc
Emitter-Base Voltage	V_{EBO}	5			Vdc
Collector Current -- Continuous	I_C	6			Adc
Base Current -- Continuous	I_B	2			Adc
Transistor Dissipation @ $T_C = 25^\circ C$ $T_A = 25^\circ C$	P_D	4.0			W
		5.8			$W/^\circ C$
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200			$^\circ C$
Pin Temperature (During Soldering) @ distances $\geq \frac{1}{32}$ " (0.8mm) from seating plane for 10s max		+235			

*In accordance with JEDEC registration data

For pnp devices, voltage and current values are negative



PIN 1: BASE
PIN 2: EMITTER
CASE: COLLECTOR

DIM	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
B	11.94	12.70	0.470	0.500
C	6.35	8.64	0.250	0.340
D	0.71	0.86	0.028	0.034
E	1.27	1.91	0.050	0.075
F	24.33	24.43	0.958	0.962
G	4.83	5.33	0.190	0.210
H	2.41	2.67	0.095	0.105
J	14.48	14.99	0.570	0.590
K	9.14	-	0.360	-
P	-	1.27	-	0.050
Q	3.61	3.86	0.142	0.152
S	-	8.89	-	0.350
T	-	3.68	-	0.145
U	-	15.75	-	0.620

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6 Lake Street Lawrence, MA 01841
1-800-446-1158 / (978) 794-1666 / FAX: (978) 689-0803

T4-4.8-860-301 REV:



NES
NEW ENGLAND SEMICONDUCTOR

2N5954
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ELECTRICAL CHARACTERISTICS FOR P-N-P TYPES ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Test Conditions				Limits						Units
		Voltage Vdc		Current Adc		2N5954		2N5955		2N5956		
		V_{CE}	V_{BE}	I_C	I_B	min	max	min	max	min	max	
Collector-Cutoff Current External base-to-emitter resistance (R_{BE}) = 100 Ω	I_{CER}	-35 -55 -75					-100		-100		-100	μA
Base-Emitter Junction Reverse Biased (R_{BE}) = 100 Ω	I_{CEX}	-45 -65 -85	1.5 1.5 1.5				-100		-100		-100	μA
Base-Emitter Junction Reverse Biased (R_{BE}) = 100 Ω $T_C = 150^\circ\text{C}$		-45 -65 -85	1.5 1.5 1.5				-2		-2		-2	mA
Base Open	I_{CEO}	-25 -45 -65					-1		-1		-1	mA
Emitter-Cutoff Current	I_{EBO}		5			-0.1		-0.1			-0.1	mA
DC Forward Current Transfer Ratio	h_{FE}	-4 -4 -4 -4		-3 ^a -2.5 ^a -2 ^a -6 ^a		20 5	100	20 5	100	20 5	100	
Collector-to-Emitter Sustaining Volt	$V_{CEO(sus)}$			-0.1 ^a		-80 ^b		-60 ^b		-40 ^b		
External base-to-emitter resistance (R_{BE}) = 100 Ω	$V_{CER(sus)}$			-0.1 ^a		-85 ^b		-65 ^b		-45 ^b		V
Base-Emitter Junction Reverse Biased (R_{BE}) = 100 Ω	$V_{CEX(sus)}$			-0.1 ^a		-90 ^b		-70 ^b		-50 ^b		
Base-Emitter Voltage	V_{BE}	-4 -4 -4		-3 ^a -2.5 ^a -2 ^a			-2		-2		-2	V
Collector-to-Emitter Saturation Volt	$V_{CE(sat)}$			-3 ^a -2.5 ^a -2 ^a	-0.3 -0.25 -0.2		-1		-1		-1	V
Magnitude of Common Emitter Small-Signal, Short-Circuit, Forward Current Transfer Ratio ($f = 1\text{MHz}$)	$ h_{fe} $	-4		-1		5		5		5		
Common-Emitter, Small-Signal, Short-Circuit, Forward-Current Transfer Ratio ($f = 1\text{MHz}$)	h_{fe}	-4		-0.5		25		25		25		
Thermal Resistance: Junction-to-Case	$R_{\theta JC}$						4.3		4.3		4.3	$^\circ\text{C/W}$

^aPulsed, pulse duration = 300 μs , duty factor = 1.8%

^bCAUTION: Sustaining voltages $V_{CEO(sus)}$, $V_{CER(sus)}$ and $V_{CEX(sus)}$ MUST NOT be measured on a curve tracer.

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