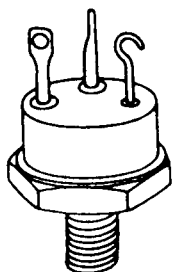
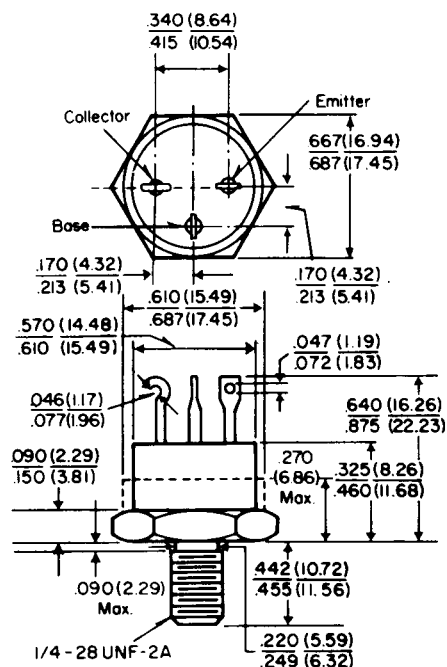


X00244

SSDI**NPN Silicon Power
Transistor
2N1724****TO-61****Application**

The SSDI 2N1724 is a NPN double epitaxial silicon power transistor designed for high reliability operation in military, space and industrial applications. Fast switching speeds, low saturation voltages and high linear gain make these transistors ideal for use in regulator, amplifier and switching circuits. The silicon chip is mounted on a molybdenum pad using hard solders for thermal fatigue protection.

**Dimensions in Inches
(and Millimeters)****Case: TO-61****Maximum Ratings and Characteristics**
T_c = 25°C unless specified

	Symbol	Rating
*Storage Temperature	T _{STG}	-65°C to 200°C
*Operating Temperature	T _J	-65°C to 175°C
*Collector-Emitter Sustaining Voltage	V _{CEO(sus)}	80V
*Collector-Base Voltage	V _{CBO}	120V
*Emitter-Base Voltage	V _{EBO}	10V
*Continuous Collector Current	I _C	5A
*Peak Collector Current		7.5A
Continuous Base Current	I _B	2A
Thermal Resistance	R _{θJC}	1.5°C/W
*Power Dissipation (T _c = 100°C)	P _T	50W

* JEDEC registered data.

SOLID STATE DEVICES, INC. SSDI

NPN Silicon Power Transistor 2N1724

Electrical Specifications

$T_C = 25^\circ\text{C}$ unless specified

Test	Symbol	Test Conditions	Limits		Units
			Min.	Max.	
* Collector Cut-off Current	I_{CES}	$V_{BE} = 0, V_{CE} = 60\text{V}$ $V_{BE} = 0, V_{CE} = 60\text{V}, T_C = 150^\circ\text{C}$ $V_{BE} = 0, V_{CE} = 120\text{V}, T_C = 150^\circ\text{C}$		1.0 2.0 10	mA mA mA
* Emitter Cut-off Current	I_{EBO}	$I_C = 0, V_{EB} = 3\text{V}$ $I_C = 0, V_{EB} = 10\text{V}$		10 10	mA mA
* Emitter Floating Potential	V_{EBF}	$V_{CB} = 80\text{V}$		10	V
* Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$ ①	$I_C = 200\text{mA}, I_B = 0$	80		V
* DC Forward Current Transfer Ratio	h_{FE} ②	$I_C = 0.1\text{A}, V_{CE} = 15\text{V}$ $I_C = 2\text{A}, V_{CE} = 15\text{V}$ $I_C = 2\text{A}, V_{CE} = 15\text{V}, T_C = -55^\circ\text{C}$	20 20 12	90	
* Collector-Emitter Saturation Voltage	$V_{CE(sat)}$ ②	$I_C = 2\text{A}, I_B = 0.2\text{A}$		1.0	V
* Base-Emitter Voltage	V_{BE} ②	$I_C = 2\text{A}, I_B = 0.2\text{A}$		2.0	V
* Output Capacitance	C_{ob}	$V_{CB} = 15\text{V}, I_E = 0, f = 1\text{ MHz}$		550	pf
Gain-Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 1\text{A}, f = 10\text{ MHz}$	40		MHz
Turn-on Time	t_{on}	$V_{CC} = 30\text{V}, I_C = 2\text{A}, I_{B(on)} = .16\text{A}$		.3	$\mu\text{sec.}$
Storage Time	t_s	$V_{CC} = 30\text{V}, I_C = 2\text{A}, I_{B(on)} = I_{B(off)} = .16\text{A}$		.6	$\mu\text{sec.}$
Fall Time	t_f	$V_{CC} = 30\text{V}, I_C = 2\text{A}, I_{B(on)} = I_{B(off)} = .16\text{A}$		.3	$\mu\text{sec.}$

① $V_{CEO(sus)}$ is measured at $I_{CEO} = 200\text{mA}$ and must not be measured on a curve tracer (See Figure 1).

② Pulsed test. Pulse width = $300\text{ }\mu\text{sec.}$, Duty cycle < 2%.

* JEDEC registered data.

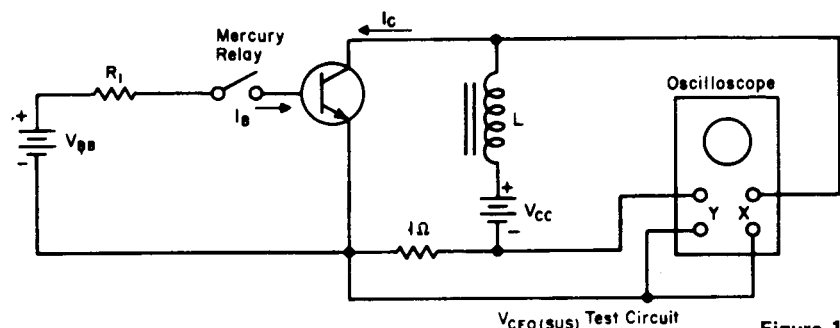
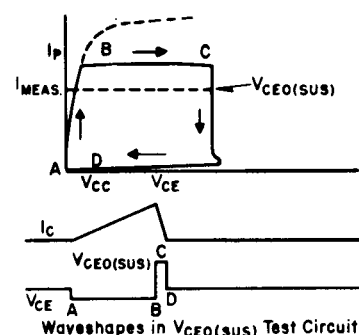


Figure 1



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