

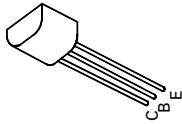
NPN SILICON PLANAR
MEDIUM POWER TRANSISTORS

ISSUE 1 – MARCH 94

FEATURES

- * 100 Volt V_{CE0}
- * Gain of 20 at $I_C = 0.5$ Amp
- * $P_{tot} = 1$ Watt

2N6716
2N6717
2N6718



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	2N6716	2N6717	2N6718	UNIT
Collector-Base Voltage	V_{CB0}	60	80	100	V
Collector-Emitter Voltage	V_{CE0}	60	80	100	V
Emitter-Base Voltage	V_{EB0}	5			V
Peak Pulse Current	I_{CM}	2			A
Continuous Collector Current	I_C	1			A
Power Dissipation at $T_{amb} = 25^\circ\text{C}$	P_{tot}	1			W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +200			$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

PARAMETER	SYMBOL	2N6716		2N6717		2N6718		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CB0}$	60		80		100		V	$I_C = 0.1\text{mA}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	60		80		100		V	$I_C = 1\text{mA}, I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EB0}$	5		5		5		V	$I_E = 1\text{mA}, I_C = 0$
Collector Cut-Off Current	I_{CB0}	1						μA	$V_{CB} = 60\text{V}, I_E = 0$ $V_{CB} = 80\text{V}, I_E = 0$ $V_{CB} = 100\text{V}, I_E = 0$
Emitter Cut-Off Current	I_{EB0}	1		1		1		μA	$V_{EB} = 5\text{V}, I_C = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	0.5 0.35		0.5 0.35		0.5 0.35		V	$I_C = 250\text{mA}, I_B = 10\text{mA}^*$ $I_C = 250\text{mA}, I_B = 25\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	1.2		1.2		1.2		V	$I_C = 250\text{mA}, V_{CE} = 1\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	80 50 20	250	80 50 20	250	80 50 20	250		$I_C = 50\text{mA}, V_{CE} = 1\text{V}^*$ $I_C = 250\text{mA}, V_{CE} = 1\text{V}^*$ $I_C = 500\text{mA}, V_{CE} = 1\text{V}^*$
Transition Frequency	f_T	50	500	50	500	50	500	MHz	$I_C = 50\text{mA}, V_{CE} = 10\text{V}$
Collector Base Capacitance	C_{CB}		30		30		30	pF	$V_{CE} = 10\text{V}, f = 1\text{MHz}$

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

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