

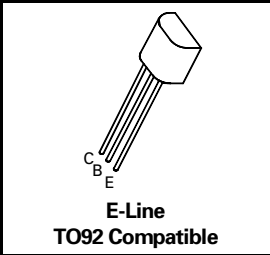
# NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

**2N6714**  
**2N6715**

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## FEATURES

- \* 40 Volt  $V_{CEO}$
- \* Gain of 50 at  $I_C = 1$  Amp
- \*  $P_{tot} = 1$  Watt



## ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	2N6714	2N6715	UNIT
Collector-Base Voltage	$V_{CBO}$	40	50	V
Collector-Emitter Voltage	$V_{CEO}$	30	40	V
Emitter-Base Voltage	$V_{EBO}$	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	2N6714		2N6715		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	40		50		V	$I_C = 1\text{mA}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30		40		V	$I_C = 10\text{mA}, I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		5		V	$I_E = 1\text{mA}, I_C = 0$
Collector Cut-Off Current	$I_{CBO}$		0.1		0.1	$\mu\text{A}$ $\mu\text{A}$	$V_{CB} = 40\text{V}, I_E = 0$ $V_{CB} = 50\text{V}, I_E = 0$
Emitter Cut-Off Current	$I_{EBO}$		0.1		0.1	$\mu\text{A}$	$V_{EB} = 5\text{V}, I_C = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.5		0.5	V	$I_C = 1\text{A}, I_B = 100\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		1.2		1.2	V	$I_C = 1\text{A}, V_{CE} = 1\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	55 60 50	250	55 60 50	250		$I_C = 10\text{mA}, V_{CE} = 1\text{V}^*$ $I_C = 100\text{mA}, V_{CE} = 1\text{V}^*$ $I_C = 1\text{A}, V_{CE} = 1\text{V}^*$
Transition Frequency	$f_T$	50	500	50	500	MHz	$I_C = 50\text{mA}, V_{CE} = 10\text{V}$
Collector Base Capacitance	$C_{CB}$		30		30	pF	$V_{CE} = 10\text{V}, f = 1\text{MHz}$

\*Measured under pulsed conditions. Pulse width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$