

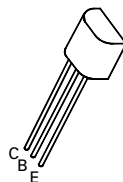
# NPN SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTORS

## 2N6724 2N6725

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### FEATURES

- \* 50 Volt  $V_{CEO}$
- \* Gain of 15k at  $I_C = 0.5$  Amp
- \*  $P_{tot} = 1$  Watt



**E-Line**  
**TO92 Compatible**

### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	2N6724	2N6725	UNIT
Collector-Base Voltage	$V_{CBO}$	50	60	V
Collector-Emitter Voltage	$V_{CEO}$	40	50	V
Emitter-Base Voltage	$V_{EBO}$	10		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	2N6724		2N6725		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	50		60		V	$I_C = 1\mu\text{A}$ , $I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	40		50		V	$I_C = 1\text{mA}$ , $I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	10		10		V	$I_E = 10\mu\text{A}$ , $I_C = 0$
Collector Cut-Off Current	$I_{CBO}$		1.0		1.0	$\mu\text{A}$ $\mu\text{A}$	$V_{CB} = 30\text{V}$ , $I_E = 0$ $V_{CB} = 40\text{V}$ , $I_E = 0$
Emitter Cut-Off Current	$I_{EBO}$		0.1		0.1	$\mu\text{A}$	$V_{EB} = 8\text{V}$ , $I_C = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		1.0		1.0	V	$I_C = 200\text{mA}$ , $I_B = 2\text{mA}^*$ $I_C = 1\text{A}$ , $I_B = 2\text{mA}^*$
			1.5		1.5	V	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		2.0		2.0	V	$I_C = 1\text{A}$ , $I_B = 2\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		2.0		2.0	V	$I_C = 1\text{A}$ , $V_{CE} = 5\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	25K		25K			$I_C = 200\text{mA}$ , $V_{CE} = 5\text{V}^*$ $I_C = 500\text{mA}$ , $V_{CE} = 5\text{V}^*$ $I_C = 1\text{A}$ , $V_{CE} = 5\text{V}^*$
		15K		15K			
		4K	40K	4K	40K		
Collector Base Capacitance	$C_{CB}$		10		10	pF	$V_{CB} = 10\text{V}$ , $f = 1\text{MHz}$

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