

# Silicon Planar Medium Power Transistors

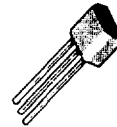
NPN 2N6724 2N6725

## FEATURES

- High gain  
– 25000 @ 200mA  
– 4000 @ 1A
- 1 Amp current capability
- Low saturation voltages

## DESCRIPTION

A monolithic double diffused planar power Darlington encapsulated in the popular E-line (To-92 style) plastic package. The specially selected SILICONE encapsulation provides resistance to severe environments comparable to metal can devices.



Plastic E-Line  
(TO-92 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 $T_{amb} = 25^\circ\text{C}$ at $T_{CASE} = 25^\circ\text{C}$	$P_{tot}$	1 2		W W
Operating & storage temp range		– 55 to + 200		$^\circ\text{C}$

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

# NPN 2N6724 2N6725

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

Parameter	Symbol	2N26724		2N6725		Unit	Conditions
		Min.	Max.	Min.	Max.		
Collector-base breakdown voltage	$V_{(BR)CBO}$	50		60		V	$I_C = 1\mu\text{A}$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	40		50		V	$I_C = 1\text{mA}$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	10		10		V	$I_E = 10\mu\text{A}$
Collector cut-off current	$I_{CBO}$		1.0		1.0	$\mu\text{A}$ $\mu\text{A}$	$V_{CB} = 30\text{V}$ $V_{CB} = 40\text{V}$
Emitter cut-off current	$I_{EBO}$		0.1		0.1	$\mu\text{A}$	$V_{EB} = 8\text{V}$
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 current transfer ratio	$h_{FE}$	25000 15000 4000	40000	25000 15000 4000	40000		$I_C = 200\text{mA}$ $I_C = 500\text{mA}$ $I_C = 1\text{A}$ } $V_{CE} = 5\text{V}$
Collector-base capacitance	$C_{CB}$		10		10	pF	$V_{CB} = 10\text{V}$ $f = 1\text{MHz}$