

Silicon Planar Medium Power Transistors

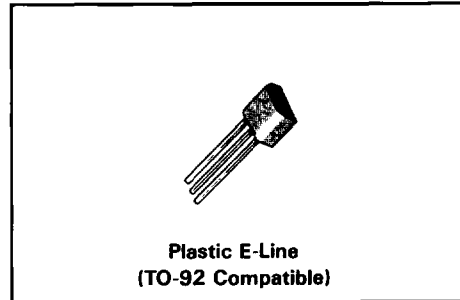
NPN 2N6714 2N6715
PNP 2N6726 2N6727

FEATURES

- Exceptional power dissipation capability
 - 2W @ $T_{CASE} = 25^{\circ}C$
 - 1W @ $T_{amb} = 25^{\circ}C$
- h_{FE} specified up to 1A
- Low saturation voltages

DESCRIPTION

A range of high performance transistors encapsulated in the popular E-line (To-92 style) plastic package. The outstanding electrical characteristics permit use in a wide range of applications including audio output & drivers, general purpose switching & lamp drive in industrial & automotive circuits.



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	2N6714 2N6726	2N6715 2N6727	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 $T_{amb} = 25^{\circ}C$ at $T_{CASE} = 25^{\circ}C$	P_{tot}	1		W
		2		W
Operating & storage temp range		-55 to +200		$^{\circ}C$

*Pulse width = 300 μ s. Duty cycle \leq 2%

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

Parameter	Symbol	2N26714,26		2N6715,27		Unit	Conditions
		Min.	Max.	Min.	Max.		
Collector-base breakdown voltage	$V_{(BR)CBO}$	40		50		V	$I_C = 1\text{mA}$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	30		40		V	$I_C = 10\text{mA}$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5		5		V	$I_E = 1\text{mA}$
Collector cut-off current	I_{CBO}		0.1		0.1	μA μA	$V_{CB} = 40\text{V}$ $V_{CB} = 50\text{V}$
Emitter cut-off current	I_{EBO}		0.1		0.1	μA	$V_{EB} = 5\text{V}$
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		$I_C = 10\text{mA}$ $I_C = 100\text{mA}$ $I_C = 1\text{A}$ } $V_{CE} = 1\text{V}$
Collector-base capacitance	C_{CB}		30		30	pF	$V_{CE} = 10\text{V}$ $f = 1\text{MHz}$
Transiton frequency	f_T	50	500	50	500	MHz	$V_{CE} = 10\text{V}$ $I_C = 50\text{mA}$