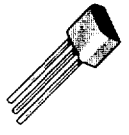
Silicon Planar Medium Power Transistors

NPN 2N6716 2N6717 2N6718
PNP 2N6728 2N6729 2N6730

FEATURES

- High V_{CE} ratings up to 100 volts
- Exceptional power dissipation capability
  - 2W @ $T_{CASE} = 25°C$
  - 1W @ $T_{amb} = 25°C$
- h_{FE} specified up to 500mA



Plastic E-Line
(TO-92 Compatible)

DESCRIPTION

A range of high performance transistors 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.

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	2N6716 2N6728	2N6717 2N6729	2N6718 2N6730	Unit
Collector-base voltage	V_{CBO}	60	80	100	V
Collector-emitter voltage	V_{CEO}	60	80	100	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 $T_{amb} = 25°C$ at $T_{CASE} = 25°C$	P_{tot}	1 2			W W
Operating & storage temp range		−55 to +200			°C

*Pulse width = 300μs. Duty cycle $\leq 2\%$

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CHARACTERISTICS (at $T_{amb} = 25°C$ unless otherwise stated).

Parameter	Symbol	2N26716,28		2N6717,29		2N6718,30		Unit	Conditions
		Min.	Max.	Min.	Max.	Min.	Max.		
Collector-base breakdown voltage	$V_{(BR)CBO}$	60		80		100		V	$I_C = 0.1mA$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	60		80		100		V	$I_C = 1mA$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5		5		5		V	$I_E = 1mA$
Collector cut-off current	I_{CBO}		1		1		1	μA μA μA	$V_{CB} = 60V$ $V_{CB} = 80V$ $V_{CB} = 100V$
Emitter cut-off current	I_{EBO}		1		1		1	μA	$V_{EB} = 5V$
Collector-emitter Saturation voltage	$V_{CE(Sat)}$		0.5 0.35		0.5 0.35		0.5 0.35	V V	$I_C = 250mA$ $I_B = 10mA$ $I_C = 250mA$ $I_B = 25mA$
Base-emitter turn-on voltage	$V_{BE(on)}$		1.2		1.2		1.2	V	$I_C = 250mA$ $V_{CE} = 1V$
Static forward Current transfer ratio	h_{FE}	80 50 20	250	80 50 20	250	80 50 20	250		$I_C = 50mA$ $I_C = 250mA$ $I_C = 500mA$ $V_{CE} = 1V$
Collector-base capacitance	C_{CB}		30		30		30	pF	$V_{CE} = 10V$ $f = 1MHz$
Transition frequency	f_T	50	500	50	500	50	500	MHz	$V_{CE} = 10V$ $I_C = 50mA$