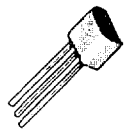
Silicon Planar Medium Power Transistors

NPN 2N6731
PNP 2N6732

FEATURES

- High V_{CE} ratings: $V_{CEO} = 80V$ min
- Exceptional power dissipation capabilities
  - 2W @ $T_{CASE} = 25°C$
  - 1W @ $T_{amb} = 25°C$
- Low saturation voltages



Plastic E-Line
(TO-92 Compatible)

DESCRIPTION

Complementary power transistors employing double diffused planar structures 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 transistors.

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	2N6731	2N6732	Unit
Collector-base voltage	V_{CBO}	100		V
Collector-emitter voltage	V_{CEO}	80		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	Min.	Max.	Unit	Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	100		V	$I_C = 0.1mA$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	80		V	$I_C = 10mA$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5		V	$I_E = 1mA$
Collector cut-off current	I_{CBO}		0.1	μA	$V_{CB} = 80V$
Emitter cut-off current	I_{EBO}		10	μA	$V_{EB} = 5V$
Collector-emitter Saturation voltage	$V_{CE(Sat)}$		0.35	V	$I_C = 350mA$ $I_B = 35mA$
Base emitter turn-on voltage	$V_{BE(on)}$		1.0	V	$I_C = 350mA$ $V_{CE} = 2V$
Static forward current transfer ratio	h_{FE}	100 100	300		$I_C = 10mA$ $I_C = 350mA$ } $V_{CE} = 2V$
Collector-base capacitance	C_{CB}		20	pF	$V_{CB} = 10V$ $f = 1MHz$
Transition frequency	f_T	50	500	MHz	$V_{CE} = 5V$ $I_C = 200mA$ $f = 20MHz$