

SOT223 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

ISSUE 4 - JANUARY 1996



BFN36

FEATURES:

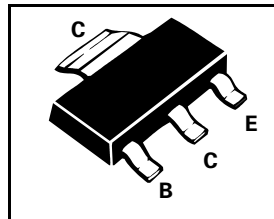
- * High V_{CEO} and Low saturation voltage

APPLICATIONS:

- * Suitable for video output stages in TV sets
- * Switching power supplies

COMPLEMENTARY TYPE - BFN37

PARTMARKING DETAILS - BFN36



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	250	V
Collector-Emitter Voltage	V_{CEO}	250	V
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	500	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	2	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^\circ\text{C}$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	250			V	$I_C=100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	250			V	$I_C=1\text{mA}$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			100 20	nA μA	$V_{CB}=200\text{V}$ $V_{CB}=200\text{V}, T_{amb}=150^\circ\text{C}$
Emitter Cut-Off Current	I_{EBO}			100	nA	$V_{EB}=4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.4	V	$I_C=20\text{mA}, I_B=2\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			0.9	V	$I_C=20\text{mA}, I_B=2\text{mA}$
Static Forward Current Transfer Ratio	h_{FE}	25 40 40				$I_C=1\text{mA}, V_{CE}=10\text{V}^*$ $I_C=10\text{mA}, V_{CE}=10\text{V}^*$ $I_C=30\text{mA}, V_{CE}=10\text{V}^*$
Transition Frequency	f_T		70		MHz	$I_C=20\text{mA}, V_{CE}=10\text{V}$ $f=100\text{MHz}$
Output Capacitance	C_{obo}		1.5		pF	$V_{CB}=30\text{V}, f=1\text{MHz}$

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

For typical characteristics graphs see FMMTA42 datasheet.