

# SOT223 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

## BFN36

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### FEATURES:

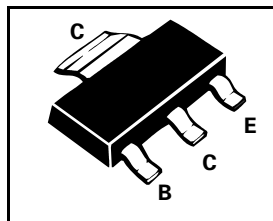
- \* High  $V_{CE0}$  and Low saturation voltage

### 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 $\mu\text{A}$	$V_{CB}=200\text{V}$ $V_{CB}=200\text{V}, T_{amb}=150^\circ\text{C}$
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	Cobo		1.5		pF	$V_{CB}=30\text{V}, f=1\text{MHz}$

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

For typical characteristics graphs see FMMTA42 datasheet.