

# SOT223 PNP SILICON PLANAR HIGH VOLTAGE TRANSISTOR

## BFN39

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### FEATURES:

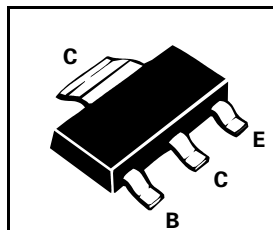
\* High  $V_{CE0}=300V$  and low  $V_{CE(sat)}$

### APPLICATIONS:

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

COMPLEMENTARY TYPE:- BFN38

PARTMARKING DETAIL:- BFN39



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-300	V
Collector-Emitter Voltage	$V_{CEO}$	-300	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Continuous Collector Current	$I_C$	-500	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	-2	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-300			V	$I_C = -100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-300			V	$I_C = -1mA$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -100\mu A$
Collector Cut-Off Current	$I_{CBO}$			-100 -20	nA $\mu A$	$V_{CB} = -250V$ $V_{CB} = -250V$ †
Emitter Cut-Off Current	$I_{EBO}$			-100	nA	$V_{EB} = -4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.5	V	$I_C = -20mA, I_B = -2mA^*$
Base Emitter Saturation Voltage	$V_{BE(sat)}$			-0.9	V	$I_C = -20mA, I_B = -2mA^*$
Static Forward Current Transfer Ratio	$h_{FE}$	25 40 30				$I_C = -1mA, V_{CE} = -10V^*$ $I_C = -10mA, V_{CE} = -10V^*$ $I_C = -30mA, V_{CE} = 10V^*$
Transition Frequency	$f_T$		100		MHz	$I_C = -20mA, V_{CE} = -10V$ $f = 100MHz$
Output Capacitance	$C_{obo}$		2.5		pF	$V_{CB} = -30V, f = 1MHz$

† $T_{amb} = 150^{\circ}C$

\*Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq 2\%$   
For typical characteristics graphs see FMMTA92 datasheet.