

SOT223 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

BCP68

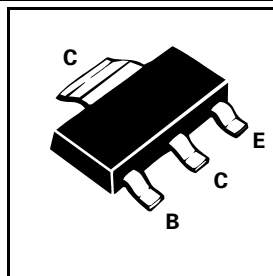
ISSUE 3 – FEBRUARY 1996

FEATURES

- * Suitable for AF drivers and output stages
- * High collector current and Low $V_{CE(sat)}$

COMPLEMENTARY TYPE – BCP69

PARTMARKING DETAIL – BCP68
BCP68 – 25



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	25	V
Collector-Emitter Voltage	V_{CEO}	20	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 $T_{amb}=25^\circ\text{C}$	P_{tot}	2	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^\circ\text{C}$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	25			V	$I_C=10\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	20			V	$I_C=30\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=10\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			100 10	nA μA	$V_{CB}=25\text{V}$ $V_{CB}=25\text{V}, T_{amb}=150^\circ\text{C}$
Emitter Cut-Off Current	I_{EBO}			10	μA	$V_{EB}=5\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5	V	$I_C=1\text{A}, I_B=100\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		0.6	1.0	V V	$I_C=5\text{A}, V_{CE}=10\text{V}^*$ $I_C=1\text{A}, V_{CE}=1\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE} BCP68 BCP68-25	50 63 160	250	400 400		$I_C=5\text{mA}, V_{CE}=10\text{V}^*$ $I_C=500\text{mA}, V_{CE}=1\text{V}^*$ $I_C=500\text{mA}, V_{CE}=1\text{V}^*$
Transition Frequency	f_T		100		MHz	$I_C=100\text{mA}, V_{CE}=5\text{V}$, $f=100\text{MHz}$

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
For typical characteristics graphs see FMMT449 datasheet.