

# SOT89 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

## BC868

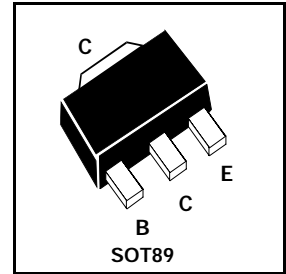
ISSUE 4 - OCTOBER 1995

### FEATURES

- \* SUITABLE FOR GENERAL AF APPLICATIONS AND CLASS B AUDIO OUTPUT STAGES UPTO 3W
- \* HIGH  $h_{FE}$  AND LOW SATURATION VOLTAGE

COMPLEMENTARY TYPE - BC869

PARTMARKING DETAILS- BC868 - CAC  
BC868-16 - CCC  
BC868-25 - CDC



### 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 $T_{amb}=25^{\circ}C$	$P_{tot}$	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-65 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	$V_{(BR)CBO}$	25			V	$I_C=100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	20			V	$I_C=10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=10\mu A$
Collector Cut-Off Current	$I_{CBO}$			10 1	$\mu A$ mA	$V_{CB} = 25V$ $V_{CB} = 25V, T_{amb} = 150^{\circ}C$
Emitter Cut-Off Current	$I_{EBO}$			10	$\mu A$	$V_{EB}=5V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5	V	$I_C=1A, I_B=100mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			1.0	V	$I_C=1A, V_{CE}=1V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	50 85 60 100 160		375 250 375		$I_C=5mA, V_{CE}=10V^*$ $I_C=500mA, V_{CE}=1V^*$ $I_C=1A, V_{CE}=1V^*$ $I_C=500mA, V_{CE}=1V^*$ $I_C=500mA, V_{CE}=1V^*$
Transition Frequency	$f_T$		60		MHz	$I_C=10mA, V_{CE}=5V$ $f = 35MHz$
Output Capacitance	$C_{obo}$		45		pF	$V_{CB}=10V, f=1MHz$

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