

# SOT223 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

## BCP55

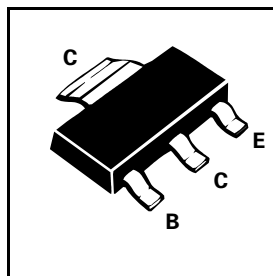
ISSUE 3 – AUGUST 1995

### FEATURES

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

COMPLEMENTARY TYPE – BCP52

PARTMARKING DETAILS – BCP55  
BCP55 – 10  
BCP55 – 16



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	60	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Peak Pulse Current	$I_{CM}$	1.5	A
Continuous Collector Current	$I_C$	1	A
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	$V_{(BR)CBO}$	60			V	$I_C=100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	60			V	$I_C=10mA$ *
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=10\mu A$
Collector Cut-Off Current	$I_{CBO}$			100 20	nA $\mu A$	$V_{CB}=30V$ $V_{CB}=30V, T_{amb}=150^{\circ}C$
Emitter Cut-Off Current	$I_{EBO}$			10	$\mu A$	$V_{EB}=5V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5	V	$I_C=500mA, I_B=50mA$ *
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			1.0	V	$I_C=500mA, V_{CE}=2V$ *
Static Forward Current Transfer Ratio	$h_{FE}$	40 25 63 100	100 160	250 160 250		$I_C=150mA, V_{CE}=2V$ * $I_C=500mA, V_{CE}=2V$ * $I_C=150mA, V_{CE}=2V$ * $I_C=150mA, V_{CE}=2V$ *
Transition Frequency	$f_T$		100		MHZ	$I_C=50mA, V_{CE}=10V,$ $f=100MHZ$

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