

# SOT223 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

## BCP53

ISSUE 3 – AUGUST 1995

### FEATURES

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

COMPLEMENTARY TYPE – BCP56

PARTMARKING DETAILS – BCP53  
BCP53 – 10  
BCP53 – 16



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-100	V
Collector-Emitter Voltage	$V_{CEO}$	-80	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	$V_{(BR)CBO}$	-100			V	$I_C = -100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-80			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	$f_T$		125		MHz	$I_C = -50mA, V_{CE} = -10V,$ $f = 100MHz$

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