

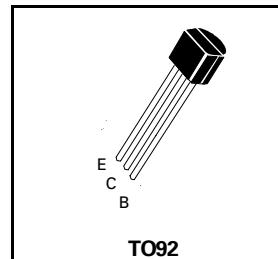
PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

BC640

ISSUE 1 – SEPT 93

FEATURES

- * 1 Amp continuous current
- * $P_{tot} = 800 \text{ mW}$



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-80	V
Collector-Emitter Voltage	V_{CEO}	-80	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-1	A
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	800	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	°C

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

PARAMETER	SYMBOL	MIN.	Typ.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-80			V	$I_C=-100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-80			V	$I_C=-10\text{mA}, I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E=-10\mu\text{A}, I_C=0$
Collector Cut-Off Current	I_{CBO}			-0.1	μA	$V_{CE}=-30\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(\text{sat})}$			-0.5	V	$I_C=-500\text{mA}, I_B=-50\text{mA}^*$
Base-Emitter Turn-on Voltage	$V_{BE(\text{on})}$			-1.0	V	$I_C=-500\text{mA}, V_{CE}=-2\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	25 40 25		160		$I_C=5\text{mA}, V_{CE}=-2\text{V}^*$ $I_C=150\text{mA}, V_{CE}=-2\text{V}^*$ $I_C=500\text{mA}, V_{CE}=-2\text{V}^*$
Transition Frequency	f_T		200		MHz	$I_C=50\text{mA}, V_{CE}=-2\text{V}$ $f=100\text{MHz}$

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%