

PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

MPSA56

ISSUE 2 – FEB 94

FEATURES

- * 80 Volt V_{CE0}
- * Gain of 50 at $I_C=100\text{mA}$



**E-Line
TO92 Compatible**

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}	-4	V
Continuous Collector Current	I_C	-500	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	750	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +175	$^\circ\text{C}$

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

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	$I_C=-1\text{mA}$, $I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-4			V	$I_E=-100\mu\text{A}$, $I_C=0$
Collector Cut-Off Current	I_{CBO}			-0.1	μA	$V_{CB}=-80\text{V}$, $I_E=0$
Collector Cut-Off Current	I_{CES}			-0.1	μA	$V_{CE}=-60\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.25	V	$I_C=-100\text{mA}$, $I_B=-10\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			-1.2	V	$I_C=-100\text{mA}$, $V_{CE}=-1\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	50 50				$I_C=-10\text{mA}$, $V_{CE}=1\text{V}^*$ $I_C=-100\text{mA}$, $V_{CE}=1\text{V}^*$
Transition Frequency	f_T	100			MHz	$I_C=-10\text{mA}$, $V_{CE}=-2\text{V}$ $f=100\text{MHz}$

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