

NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

MPSA06

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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 $\leq 2\%$