

DESCRIPTION

MPS8097 is NPN silicon planar epitaxial transistor designed for general purpose applications.

TO-92A



EBC

ABSOLUTE MAXIMUM RATINGS

Collector-Base Voltage	V_{CBO}	40V
Collector-Emitter Voltage	V_{CEO}	40V
Emitter-Base Voltage	V_{EBO}	6V
Collector Current	I_C	200mA
Continuous Power Dissipation	P_d	350mW
Operating & Storage Junction Temperature	T_j, T_{stg}	-55 to +150°C

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	V_{CEO}	40		V	$I_C=10\text{mA}$ $I_B=0^*$
Collector-Base Breakdown Voltage	V_{CBO}	40		V	$I_C=100\mu\text{A}$ $I_E=0$
Emitter-Base Breakdown Voltage	V_{EBO}	6		V	$I_E=10\mu\text{A}$ $I_C=0$
Collector Cutoff Current	I_{CBO}		30	nA	$V_{CE}=40\text{V}$ $I_B=0$
Collector Cutoff Current	I_{CBO}		10	μA	$V_{CB}=60\text{V}$ $I_E=0$
Emitter Cutoff Current	I_{EBO}		20	nA	$V_{EB}=6\text{V}$ $I_C=0$



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ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
D.C. Current Gain	H_{FE}	250	700		$I_C=0.1\text{mA}$ $V_{CE}=5\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(\text{sat})}$		0.4	V	$I_C=100\text{mA}$ $I_B=5\text{mA}^*$
			0.3	V	$I_C=100\text{mA}$ $I_B=10\text{mA}^*$
Base-Emitter Voltage	V_{BE}		0.65	V	$I_C=0.1\text{mA}$ $V_{CE}=5\text{V}$
Current Gain-Bandwidth Product	f_T	250		MHz	$I_C=10\text{mA}$ $V_{CE}=5\text{V}$ $f=100\text{MHz}$
Output Capacitance	C_{ob}		4	pF	$V_{CB}=5\text{V}$ $I_E=0$ $f=1\text{MHz}$
Input Capacitance	C_{ib}		10	pF	$V_{EB}=0.5\text{V}$ $I_C=0$ $f=1\text{MHz}$

* Pulse Test : Pulse Width $\leq 300\mu\text{s}$, Duty Cycle = 2%.