MICRO ELECTRONICS

SILICON
TRANSISTOR

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 (Ta=25°C)

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

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ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

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

* Pulse Test : Pulse Width $\leqslant$ 300μs, Duty Cycle = 2%.