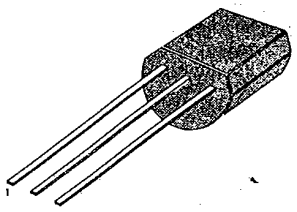
MPS5172 NPN EPITAXIAL SILICON TRANSISTOR

AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage: V_{CEO}=25V
- Collector Dissipation: P_C (max)=625mW

TO-92



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	25	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_j	150	°C
Storage Temperature	Tstg	−55~150	°C

- Refer to MPSA10 for graphs

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ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=10mA, I_B=0	25			V
Collector Cut-off Current	I_{CBO}	V_{CB}=25V, I_E=0			100	nA
Collector Cut-off Current	I_{CES}	V_{CE}=25V, V_{BE}=0			100	nA
Emitter Cut-off Current	I_{EBO}	V_{BE}=5V, I_C=0			100	nA
*DC Current Gain	h_{FE}	I_C=10mA, V_{CE}=10V	100		500	
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=10mA, I_B=1mA			0.25	V
Base-Emitter Saturation Voltage	V_{BE} (sat)	I_C=10mA, I_B=1mA		0.75		V
Current Gain Bandwidth Product	f_T	I_C=2mA, V_{CE}=5V		120		MHz
Base Emitter On Voltage	V_{BE} (on)	I_C=10mA, V_{CE}=10V	0.5		1.2	V

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%