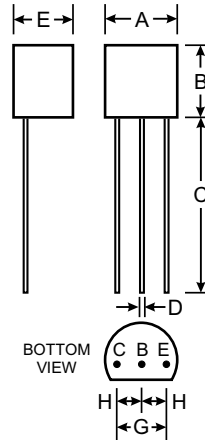


Features

- Epitaxial Planar Die Construction
- High Transition Frequency
- Recommended for Driver and Low-Power Output Stages

Mechanical Data

- Case: TO-92, Plastic
- Leads: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Marking: Type Number
- Weight: 0.18 grams (approx.)



TO-92		
Dim	Min	Max
A	4.32	4.83
B	4.32	4.78
C	12.50	15.62
D	0.36	0.56
E	3.15	3.94
G	2.29	2.79
H	1.14	1.40
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	MPSA05	MPSA06	Unit
Collector-Base Voltage	MPSA05 MPSA06 V_{CB0}	60	80	V
Collector-Emitter Voltage	MPSA05 MPSA06 V_{CEO}	60	80	V
Emitter-Base Voltage	V_{EBO}	4.0		V
Collector Current (continuous)	(Note 1) I_C	500		mA
Power Dissipation	(Note 1) P_d	625		mW
Thermal Resistance, Junction to Ambient	(Note 1) $R_{\theta JA}$	200		K/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3		K/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150		$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Conditions
Collector-Emitter Breakdown Voltage	MPSA05 MPSA06 $V_{(BR)CEO}$	60 80	—	V	$I_C = 1.0\text{mA}, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	4.0	—	V	$I_E = 100\mu\text{A}, I_C = 0$
Collector Cutoff Current	I_{CEO}	—	0.1	μA	$V_{CE} = 60\text{V}, I_B = 0$
Collector Cutoff Current	MPSA05 MPSA06 I_{CBO}	—	0.1	μA	$V_{CB} = 60\text{V}, I_E = 0$ $V_{CB} = 80\text{V}, I_E = 0$
DC Current Gain	h_{FE}	50	—	—	$V_{CE} = 1.0\text{V}, I_C = 10\text{mA}$ $V_{CE} = 1.0\text{V}, I_C = 100\text{mA}$
Collector Saturation Voltage (Note 2)	$V_{CE(SAT)}$	—	0.25	V	$I_C = 100\text{mA}, I_B = 10\text{mA}$
Base-Emitter ON-Voltage	$V_{BE(ON)}$	—	1.2	V	$V_{CE} = 1.0\text{V}, I_C = 100\text{mA}$
Gain Bandwidth Product	f_T	100	—	MHz	$V_{CE} = 2.0\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$

- Notes:
1. Valid provided that leads at a distance of 2.0mm from case are kept at specified ambient temperature.
 2. Pulse Test: Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.