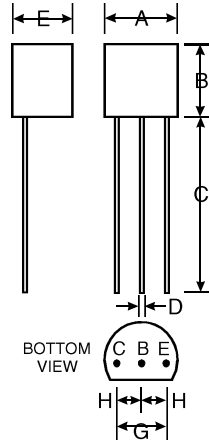


Features

High Current Gains
Monolithic Construction
Available in Both Through-Hole and
Surface Mount Packages

Mechanical Data

Case: TO-92, Molded 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	MPSA13	MPSA14	Unit
Collector - Emitter Voltage	V_{CES}	30		V
Collector - Base Voltage	V_{CBO}	30		V
Emitter - Base Voltage	V_{EBO}	10		V
Collector Current (continuous)	I_C	500		mA
Total Power Dissipation (Note 1)	P_d	625		mW
Thermal Resistance, Junction to Ambient (Note 1)	R_{JA}	200		K/W
Thermal Resistance, Junction to Case	R_{JC}	83.3		K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150		C

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

Characteristic	Symbol	Min A13	Max A13	Min A14	Max A14	Unit	Test Condition
Collector to Emitter Breakdown Voltage	$V_{(BR)CES}$	30		30		V	$I_C = 100\text{ A}, I_B = 0$
Collector Cutoff Current	I_{CBO}		100		100	nA	$V_{CB} = 30\text{V}, I_E = 0$
Emitter Cutoff Current	I_{EBO}		100		100	nA	$V_{EB} = 10\text{V}, I_C = 0$
DC Current Gain	h_{FE}	5,000 10,000		10,000 20,000			$I_C = 10\text{mA}, V_{CE} = 5.0\text{V}$ $I_C = 100\text{mA}, V_{CE} = 5.0\text{V}$
Collector-Emitter Saturation Voltage (Note 2)	$V_{CE(SAT)}$		1.5		1.5	V	$I_C = 100\text{mA}, I_B = 0.1\text{mA}$
Base-Emitter "ON" Voltage (Note 2)	$V_{BE(ON)}$		2.0		2.0	V	$I_C = 100\text{mA}, V_{CE} = 5.0\text{V}$
Current Gain Bandwidth Product	f_T	125		125		MHz	$I_C = 10\text{mA}, V_{CE} = 5.0\text{V}$ $f = 100\text{MHz}$

Notes: 1. Leads maintained at a distance of 2.0 mm from body at specified ambient temperature.
2. Pulse test: Pulse width 300 μs , duty cycle 2%.