



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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MPSA10 T-29-23
 NPN Amplifier Transistor

 • $V_{CE0} \dots 40 \text{ V (Min)}$
PACKAGE
 MPSA10

TO-92

ABSOLUTE MAXIMUM RATINGS (Note 1)**Temperatures**
 Storage Temperature -55°C to 150°C
 Operating Junction Temperature 150°C
Power Dissipation (Notes 2 & 3)
 Total Dissipation at
 25°C Ambient Temperature 0.625 W
 25°C Case Temperature 1.0 W
Voltages & Currents
 V_{CE0} Collector to Emitter Voltage 40 V
 (Note 4)
 V_{EB0} Emitter to Base Voltage 4.0 V
 I_C Collector Current (Peak) 100 mA
ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted) (Note 6)

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
BV_{CE0}	Collector to Emitter Breakdown Voltage	40		V	$I_C = 1.0 \text{ mA}, I_B = 0$
BV_{EB0}	Emitter to Base Breakdown Voltage	4.0		V	$I_E = 100 \mu\text{A}, I_C = 0$
I_{CBO}	Collector Cutoff Current		100	nA	$V_{CB} = 30 \text{ V}, I_E = 0$
h_{FE}	DC Current Gain (Note 5)	40	400		$I_C = 5.0 \mu\text{A}, V_{CE} = 10 \text{ V}$
f_T	Current Gain Bandwidth Product	125		MHz	$I_C = 5.0 \text{ mA}, V_{CE} = 10 \text{ V}, f = 100 \text{ MHz}$
C_{obo}	Output Capacitance		4.0	pF	$V_{CB} = 10 \text{ V}, I_E = 0, f = 100 \text{ MHz}$

NOTES:

- These ratings are limiting values above which the serviceability of any individual semiconductor device may be impaired.
- These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
- These ratings give a maximum junction temperature of 150°C and junction-to-case thermal resistance of 125°C/W (derating factor of $8.0 \text{ mW}^{\circ}\text{C}$); junction-to-ambient thermal resistance of 200°C/W (derating factor of $5.0 \text{ mW}^{\circ}\text{C}$).
- Rating refers to a high current point where collector to emitter voltage is lowest.
- Pulse conditions: length = $300 \mu\text{s}$; duty cycle = 1%.
- For product family characteristic curves, refer to Curve Set T144.