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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!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: [info@chipsmall.com](mailto:info@chipsmall.com) Web: [www.chipsmall.com](http://www.chipsmall.com)

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





## MPSA05

### NPN General Purpose Amplifier

## Features

- This device is designed for use as general purpose amplifiers and switches requiring collector currents to 300mA
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: MPSA05
- Halogen free available upon request by adding suffix "-HF"

## Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	4.0	V
$I_C$	Collector Current, Continuous	500	mA
$T_J$	Operating Junction Temperature	-55 to +150	°C
$T_{STG}$	Storage Temperature	-55 to +150	°C

## Thermal Characteristics

Symbol	Rating	Max	Unit
$P_D$	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
$R_{JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
$R_{JA}$	Thermal Resistance, Junction to Ambient	200	°C/W

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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### OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ( $I_C=1.0mA$ , $I_B=0$ )	60	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu A$ , $I_C=0$ )	4.0	---	Vdc
$I_{CEO}$	Collector Cutoff Current ( $V_{CE}=60Vdc$ , $I_B=0$ )	---	0.1	uAdc
$I_{CBO}$	Emitter Cutoff Current ( $V_{CB}=60Vdc$ , $I_E=0$ )	---	0.1	uAdc

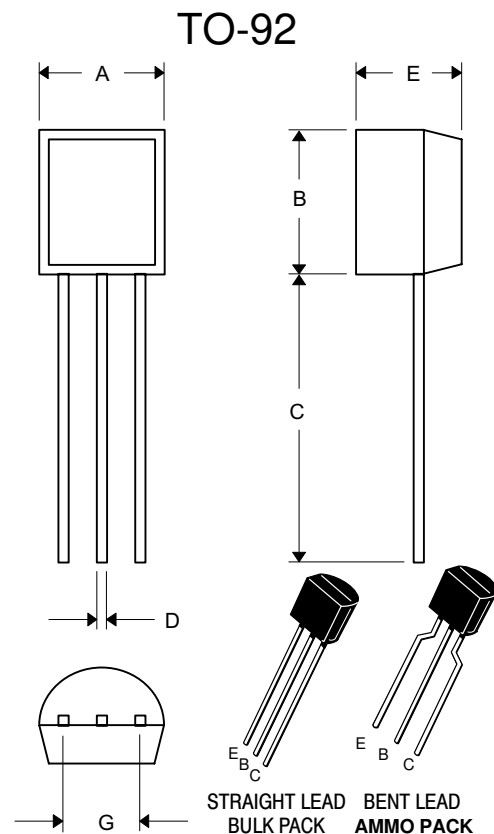
### ON CHARACTERISTICS

$h_{FE}$	DC Current Gain ( $V_{CE}=1.0Vdc$ , $I_C=10mA$ ) ( $V_{CE}=1.0Vdc$ , $I_C=100mA$ )	100 100	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=100mA$ , $I_B=10mA$ )	---	0.25	Vdc
$V_{BE(on)}$	Base-Emitter On Voltage ( $I_C=100mA$ , $V_{CE}=1.0Vdc$ )	---	1.2	Vdc

### Small Signal Characteristics

$f_T$	Current Gain Bandwidth Product ( $I_C=10mA$ , $V_{CE}=2.0Vdc$ , $f=100MHz$ )	100	---	MHz
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\* Pulse Test: Pulse Width<300us, Duty Cycle<2.0%



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

\* For ammo packing detailed specification, click here to visit our website of product packaging for details.

## Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/ Carton
Part Number-BP	Bulk: 100Kpcs/ Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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