



MPS3702

Features

- This device is designed for use as general purpose amplifiers and switches requiring collector currents to 500mA
- 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

Maximum Ratings*

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	25	V
V_{CBO}	Collector-Base Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current, Continuous	800	mA
T_J	Operating Junction Temperature	-55 to +150	$^{\circ}C$
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}C$

Thermal Characteristics

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

Electrical Characteristics @ 25 $^{\circ}C$ Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ($I_C=10mA$, $I_E=0$)	25	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=100\mu A$, $I_E=0$)	40	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=100\mu A$, $I_C=0$)	5.0	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=20Vdc$, $I_E=0$)	---	100	nAdc
I_{EBO}	Base Cutoff Current ($V_{EB}=3.0Vdc$, $I_C=0$)	---	100	nAdc

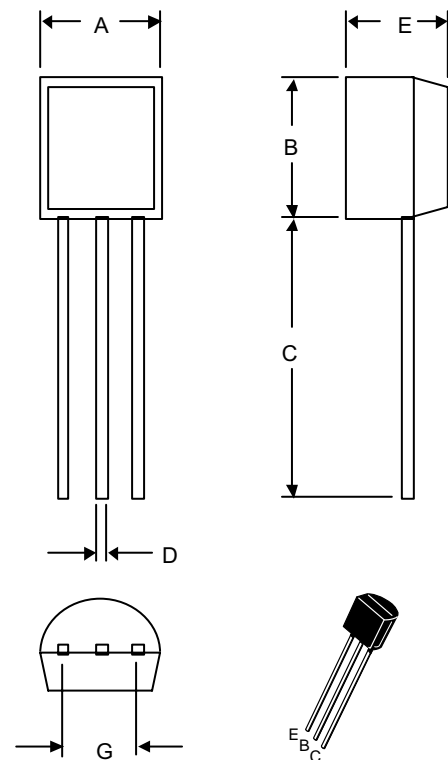
* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Notes: 1. These ratings are based on a maximum junction temperature of 150 degrees C.

2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

PNP General Purpose Amplifier

TO-92



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.170	.190	4.33	4.83	
B	.170	.190	4.30	4.83	
C	.550	.590	13.97	14.97	
D	.010	.020	0.36	0.56	
E	.130	.160	3.30	3.96	
G	.096	.104	2.44	2.64	

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Symbol	Parameter	Min	Max	Units
ON CHARACTERISTICS				
h_{FE}	DC Current Gain ($V_{CE}=5.0Vdc, I_C=50mA$)	60	300	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=50mA, I_B=5.0mA$)	---	0.25	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=50mA, V_{CE}=5.0Vdc$)	0.6	1.0	Vdc
SMALL-SIGNAL CHARACTERISTICS				
C_{OB}	Output Capacitance ($V_{CB}=10Vdc, f=1.0MHz$)	---	12	pF
f_T	Current Gain-Bandwidth Product ($I_C=50mA, V_{CE}=5.0Vdc, f=20MHz$)	100	---	MHz



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Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 2Kpcs/Ammo Box
Part Number-BP	Bulk: 100Kpcs/Carton

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