



Micro Commercial Components



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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

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

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 =100μA, I _C =0)	4.0	---	Vdc
I _{CEO}	Collector Cutoff Current (V _{CE} =60Vdc, I _B =0)	---	0.1	μAdc
I _{CBO}	Emitter Cutoff Current (V _{CB} =60Vdc, I _E =0)	---	0.1	μAdc

ON CHARACTERISTICS

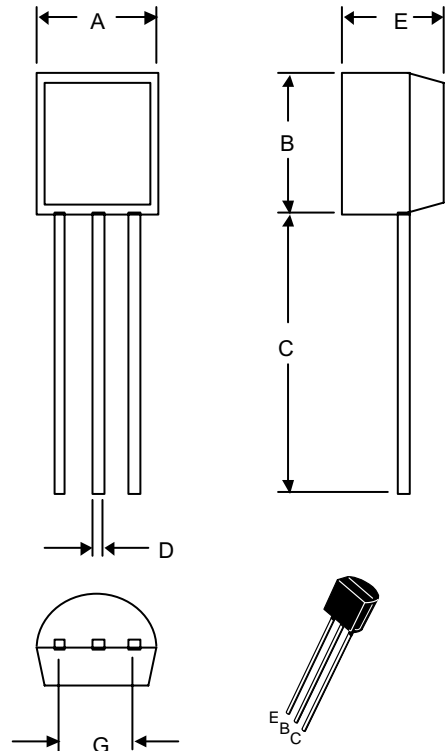
h _{FE}	DC Current Gain (V _{CE} =1.0Vdc, I _C =10mA) (V _{CE} =1.0Vdc, I _C =100mA)	100 100	---	---
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =100mA, I _B =10mA)	---	0.25	Vdc
V _{BE(on)}	Base-Emitter On Voltage (I _C =100mA, V _{CE} =1.0Vdc)	---	1.2	Vdc

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%

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DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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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Ordering Information :

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

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