

**Micro Commercial Components** 



Micro Commercial Components 20736 Marilla Street Chatsworth CA 91311

Phone: (818) 701-4933 (818) 701-4939 Fax:

## **MPS2222A**

## **Features**

- Wide operating junction temperature: -55°C+150°C
- Capable of 600mWatts of Power Dissipation
- Collector-current 0.6A
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Marking:Type number Lead Free Finish/RoHS Compliant ("P" Suffix designates

# RoHS Compliant. See ordering information) **Electrical Characteristics @ 25 C Unless Otherwise Specified**

Symbol	Parameter	Min	Max	Units	
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I <sub>C</sub> =10mAdc, I <sub>B</sub> =0)	Voltage* 40 V			
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage (I <sub>C</sub> =10μAdc, I <sub>E</sub> =0)		Vdc		
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I <sub>E</sub> =10μAdc, I <sub>C</sub> =0)	6.0		Vdc	
I <sub>BL</sub>	Base Cutoff Current (V <sub>CE</sub> =60Vdc, V <sub>BE</sub> =3.0Vdc)		20	nAdc	
I <sub>CEX</sub>	Collector Cutoff Current (V <sub>CE</sub> =60Vdc, V <sub>BE</sub> =3.0Vdc)		10	nAdc	

## **ON CHARACTERISTICS**

h <sub>FE</sub>	DC Current Gain*			
	(I <sub>C</sub> =0.1mAdc, V <sub>CE</sub> =10Vdc)	35		
	(I <sub>C</sub> =1.0mAdc, V <sub>CE</sub> =10Vdc)	50		
	$(I_C=10 \text{mAdc}, V_{CE}=10 \text{Vdc})$	75		
	(I <sub>C</sub> =150mAdc, V <sub>CE</sub> =10Vdc)	100	300	
	(I <sub>C</sub> =150mAdc, V <sub>CE</sub> =1.0Vdc)	50		
	(I <sub>C</sub> =500mAdc, V <sub>CE</sub> =10Vdc)	40		
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage			
` ′	(I <sub>C</sub> =150mAdc, I <sub>B</sub> =15mAdc)		0.3	Vdc
	(I <sub>C</sub> =500mAdc, I <sub>B</sub> =50mAdc)		1.0	
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage			
' '	$(I_C=150 \text{mAdc}, I_B=15 \text{mAdc})$	0.6	1.2	Vdc
	$(I_C=500 \text{mAdc}, I_B=50 \text{mAdc})$		2.0	

## SMALL-SIGNAL CHARACTERISTICS

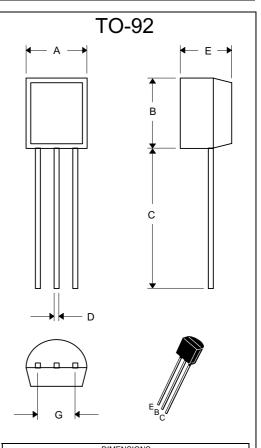
f⊤	Current Gain-Bandwidth Product (I <sub>C</sub> =20mAdc, V <sub>CE</sub> =20Vdc, f=100MHz)	300		MHz
C <sub>obo</sub>	Output Capacitance (V <sub>CB</sub> =10Vdec, I <sub>E</sub> =0, f=100kHz)		8.0	pF
C <sub>ibo</sub>	Input Capacitance (V <sub>BE</sub> =0.5Vdc, I <sub>C</sub> =0, f=100kHz)		25	pF
NF	Noise Figure ( $I_C=100\mu Adc$ , $V_{CE}=10Vdc$ , $R_S=1.0k\Omega$ f=1.0kHz)		4.0	dB

## **SWITCHING CHARACTERISTICS**

t <sub>d</sub>	Delay Time	(V <sub>CC</sub> =30Vdc, V <sub>BE</sub> =0.5Vdc	10	ns	
t <sub>r</sub>	Rise Time	$I_C=150$ mAdc, $I_{B1}=15$ mAdc)	25	ns	
t <sub>s</sub>	Storage Time	(V <sub>CC</sub> =30Vdc, I <sub>C</sub> =150mAdc	225	ns	
t <sub>f</sub>	Fall Time	$I_{B1}=I_{B2}=15$ mAdc)	60	ns	

\*Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

## **NPN General Purpose Amplifier**

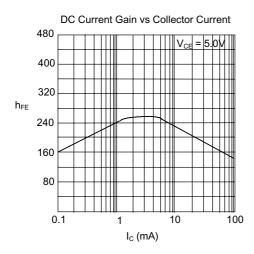


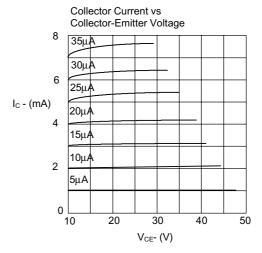
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
Α	.175	.185	4.45	4.70	
В	.175	.185	4.45	4.70	
С	.500		12.70		
D	.016	.020	0.41	0.56	
Е	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

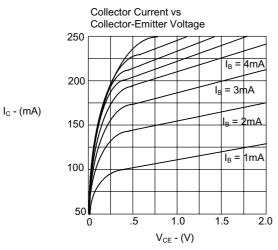
## **MPS2222A**

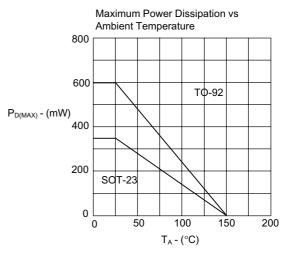


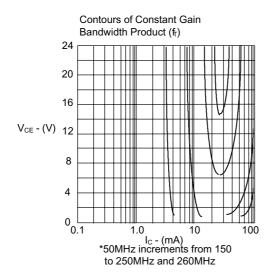
## **Micro Commercial Components**

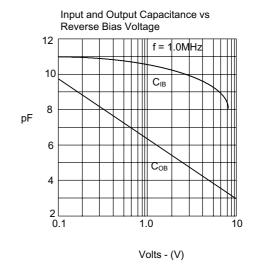








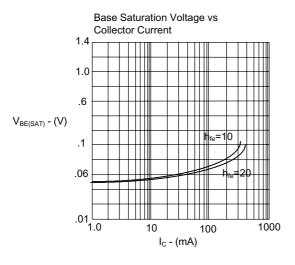


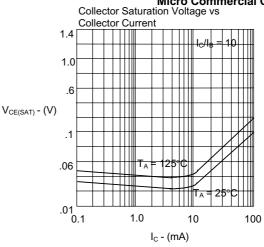


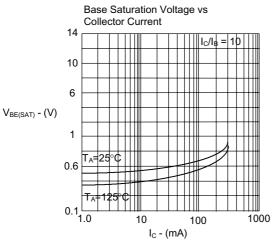
## **MPS2222A**

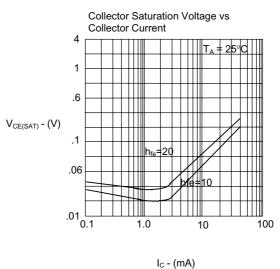
# $\cdot M \cdot C \cdot C \cdot$

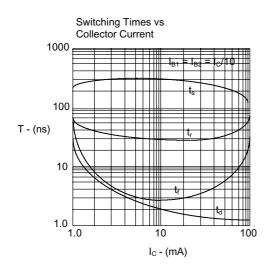
## Micro Commercial Components













## **Micro Commercial Components**

## **Ordering Information:**

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

## \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

#### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

#### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources. MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.