

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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**Micro Commercial Components** 

Micro Commercial Components 20736 Marilla Street Chatsworth

CA 91311

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## **MJD122**

### **Features**

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- High DC Current Gain
- Electrically similar to popular TIP 122
- Built-in a damper diode at E-C
- Maximum Thermal Resistance: 83.3°C/W Junction to Ambient

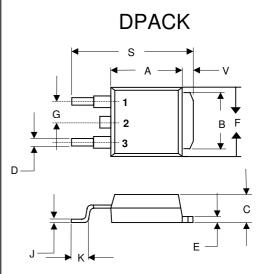
### Maximum Ratings @ 25°C Unless Otherwise Specified

Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current-Continuous	8	Α
Pc	Collector Dissipation	1.5	W
$T_J$	Operating Junction Temperature	150	$^{\circ}\mathbb{C}$
T <sub>STG</sub>	Storage Temperature	-55 to +150	$^{\circ}$

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Тур	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I <sub>C</sub> =30mAdc, I <sub>B</sub> =0)	100			Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I <sub>C</sub> =1mAdc, I <sub>E</sub> =0)	100			Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage $(I_E=3mAdc, I_C=0)$	5			Vdc
I <sub>CBO</sub>	Collector Cutoff Current (V <sub>CB</sub> =100Vdc, I <sub>E</sub> =0)			10	nAdc
I <sub>CEO</sub>	Collector emitter cutoff Current (V <sub>CE</sub> =50Vdc, I <sub>E</sub> =0)			10	nAdc
I <sub>EBO</sub>	Emitter Cutoff Current (V <sub>EB</sub> =5Vdc, I <sub>C</sub> =0)			2	nAdc
h <sub>FE</sub>	DC Current Gain (I <sub>C</sub> =-4Adc, V <sub>CE</sub> =-4Vdc) (I <sub>C</sub> =-8Adc, V <sub>CE</sub> =-4Vdc)	1000		12000	
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =4Adc, I <sub>B</sub> =16mAdc) (I <sub>C</sub> =8Adc, I <sub>B</sub> =80mAdc)			2 4	Vdc Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I <sub>C</sub> =8Adc, I <sub>B</sub> =80mAdc)			4.5	Vdc
$V_{BE}$	Base-Emitter Saturation Voltage (I <sub>C</sub> =4Adc, V <sub>CE</sub> =4Vdc)			2.8	Vdc
$C_{ob}$	Output Capacitance (V <sub>CB</sub> =10Vdc, f=0.1MHz, I <sub>E</sub> =0)			200	pF

# Silicon NPN epitaxial planer Transistors



PIN 1. BASE PIN 2. COLLECTOR PIN 3. EMITTER

DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
Α	0.235	0.245	5.97	6.22	
В	0.205	0.215	5.21	5.46	
С	0.086	0.094	2.19	2.38	
D	0.025	0.035	0.64	0.89	
Е	0.035	0.045	0.99	1.14	
F	0.250	0.265	6.35	6.73	
G	0.090		2.:	28	
J	0.018	0.023	0.48	0.58	
K	0.020		0.51		
S	0.370	0.410	9.40	10.42	
V	0.035	0.050	0.88	1.27	



#### **Micro Commercial Components**

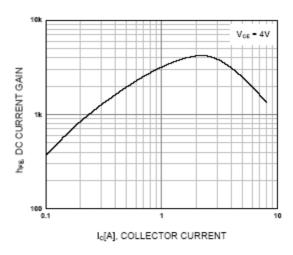


Figure 1. DC current Gain

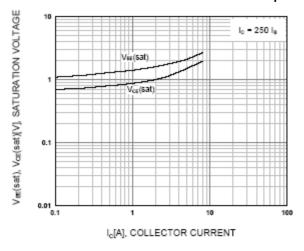


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

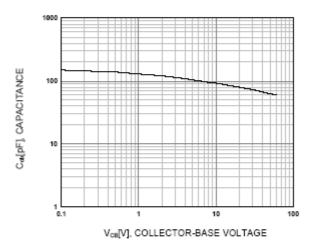


Figure 3. Collector Output Capacitance

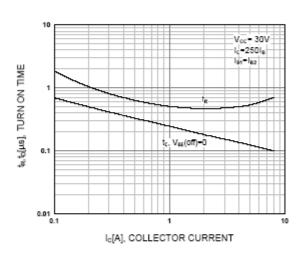


Figure 4. Turn On Time

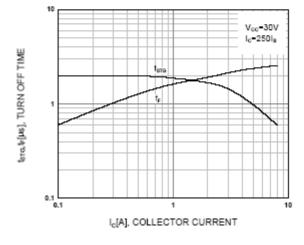


Figure 5. Turn Off Time

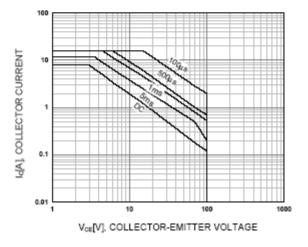


Figure 6. Safe Operating Area



## **Ordering Information**

Device	Packing
(Part Number)-TP	Tape&Reel2.5Kpcs/Reel

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