

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## MJD122T4G(MS)


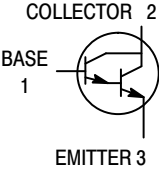

Product specification

**TRANSISTOR (NPN)**

**FEATURES**

- High DC Current Gain
- Electrically Similar to Popular TIP122
- Built-in a Damper Diode at E-C

**Reference News**

PACKAGE OUTLINE	Pin Configuration	Marking
 <p>1.BASE 2.COLLECTOR 3.EMITTER</p>		

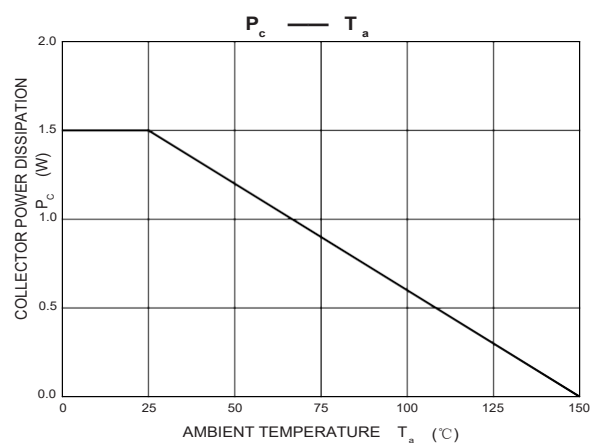
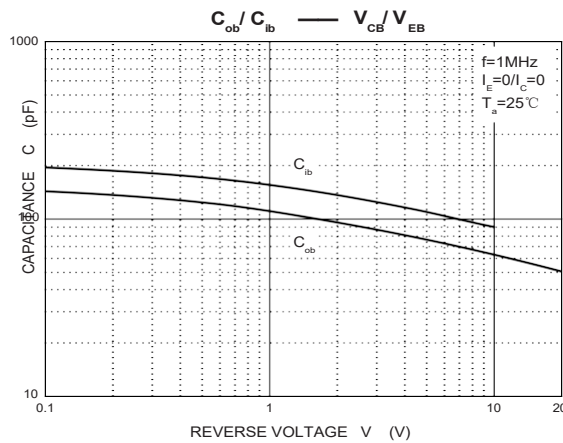
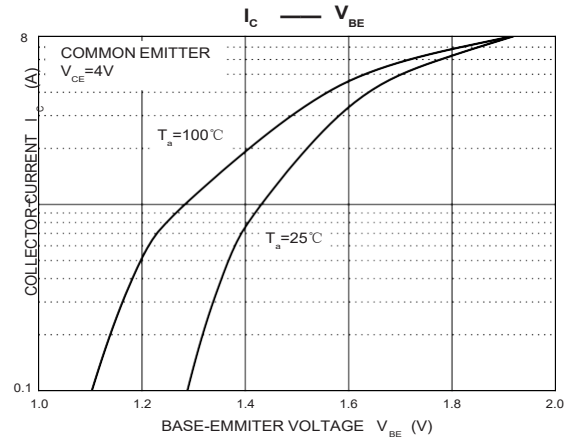
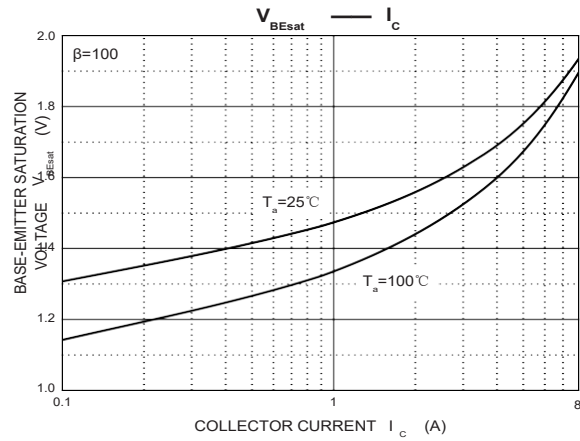
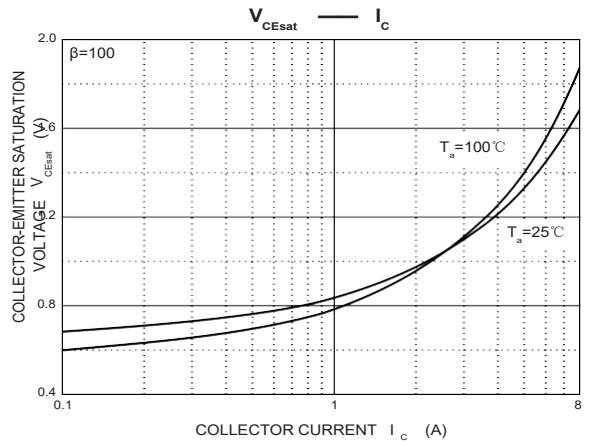
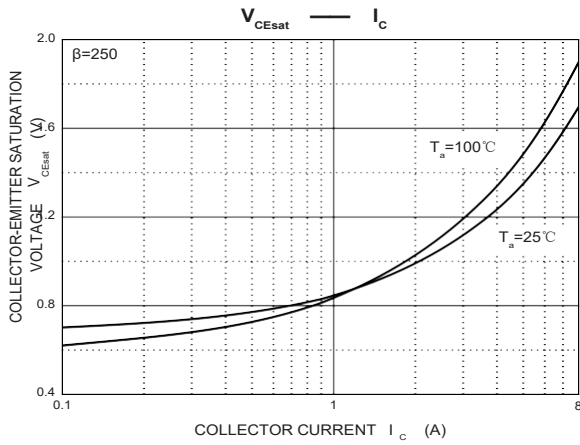
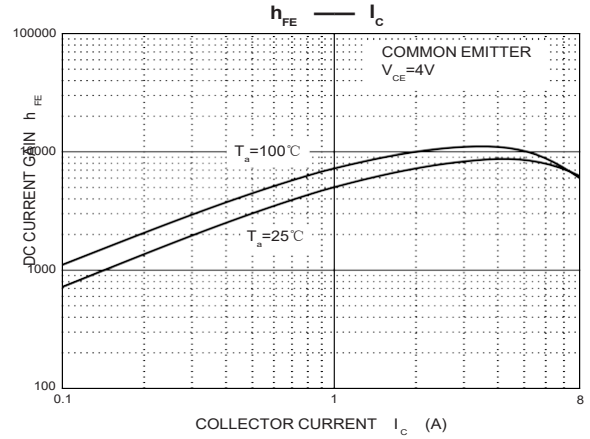
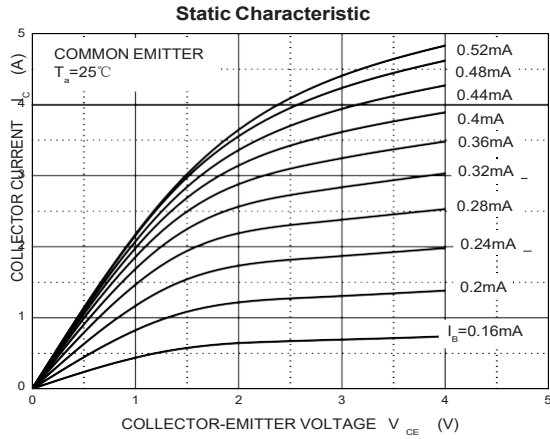
**MAXIMUM RATINGS (Ta=25 °C unless otherwise noted)**

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	-100	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-100	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>c</sub>	Collector Current -Continuous	-6	A
I <sub>cP</sub> *	Collector Current -Pulse	-10	A
P <sub>c</sub>	Collector Power Dissipation	1.25	W
T <sub>J</sub> ,T <sub>stg</sub>	Operating Junction and Storage Temperature Range	-55-150	°C

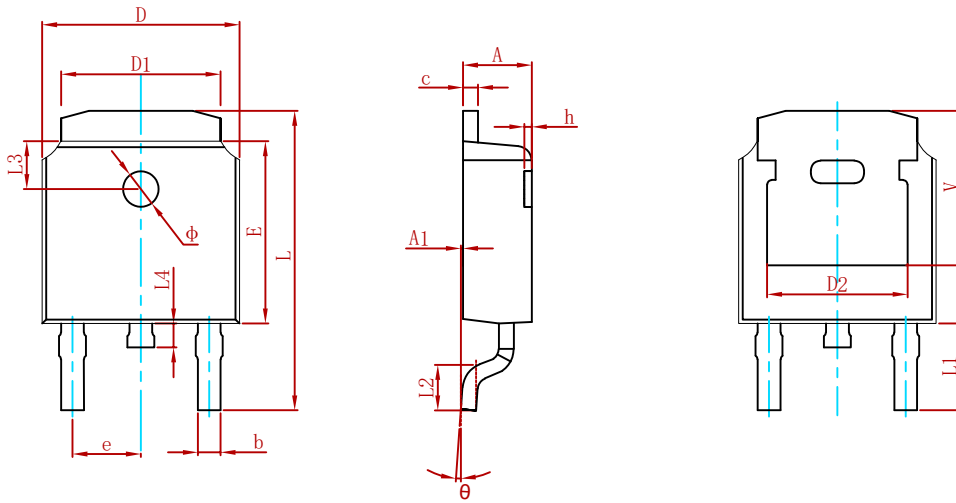
**ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =1mA, I <sub>E</sub> =0	100			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =30mA, I <sub>B</sub> =0	100			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =3mA, I <sub>C</sub> =0	5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =100V, I <sub>E</sub> =0			10	μA
Collector-emitter cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> =50V, I <sub>E</sub> =0			10	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			2	mA
DC current gain	h <sub>FE(2)</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =4A	1000		12000	
	h <sub>FE(3)</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =8A	100			
Collector-emitter saturation voltage	V <sub>CE(sat) (1)</sub>	I <sub>C</sub> =4A, I <sub>B</sub> =16mA			2	V
	V <sub>CE(sat) (2)</sub>	I <sub>C</sub> =8A, I <sub>B</sub> =80mA			4	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =8A, I <sub>B</sub> =80mA			4.5	V
Base-emitter voltage*	V <sub>BE</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =4A			2.8	V
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=0.1MHz			200	pF

Typical Characteristics

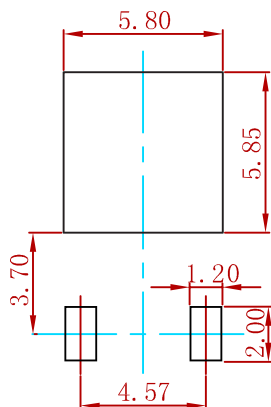


**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.635	0.770	0.025	0.030
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.382	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.250 REF.		0.207 REF.	

**Suggested Pad Layout**



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
MJD122T4G(MS)	TO-252	2500

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