

# TO-251-3L Plastic-Encapsulate Transistors

## MJD127 TRANSISTOR (PNP)

### FEATURES

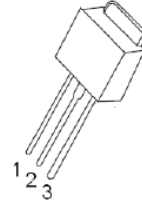
- High DC Current Gain
- Electrically Similar to Popular TIP127
- Built-in a Damper Diode at E-C

### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CB0</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	-8	A
P <sub>C</sub>	Collector Power Dissipation	1.5	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

### TO-251-3L

1. BASE
2. COLLECTOR
3. EMITTER



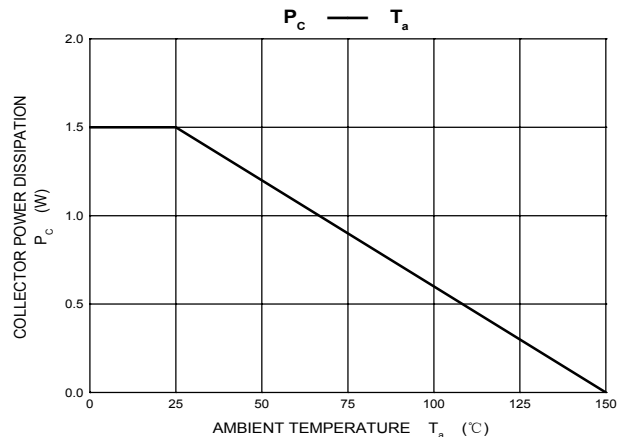
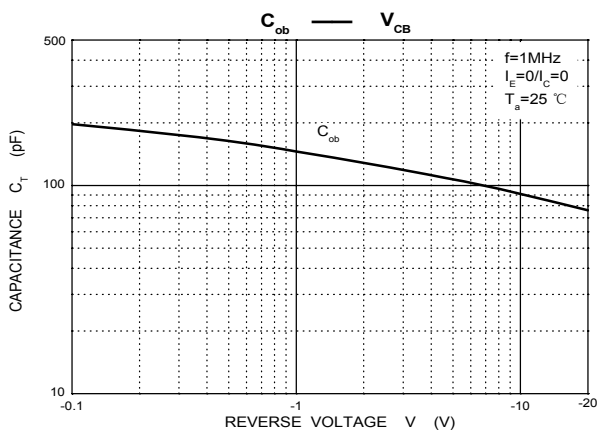
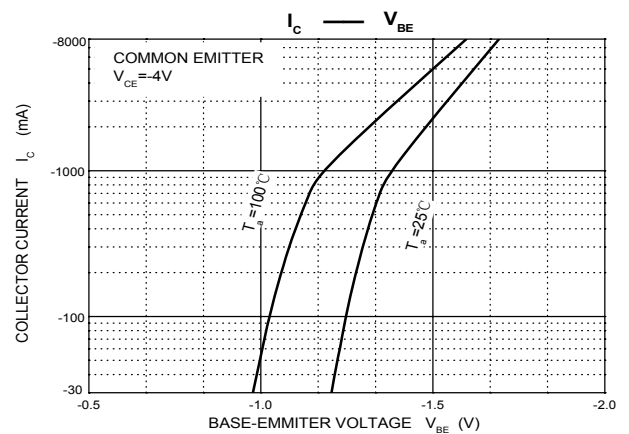
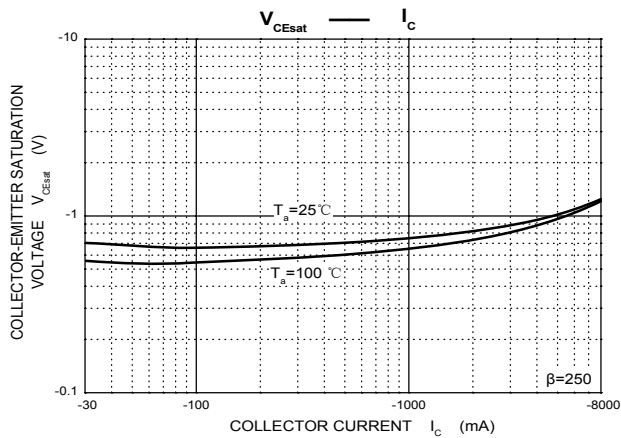
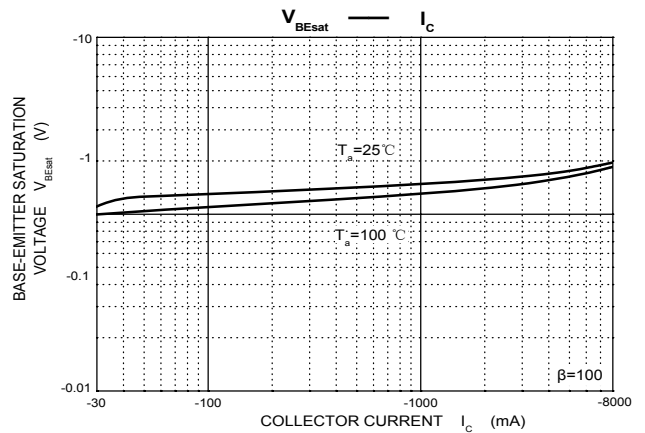
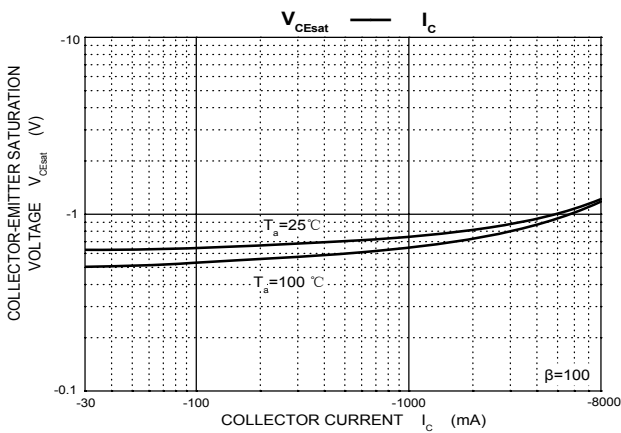
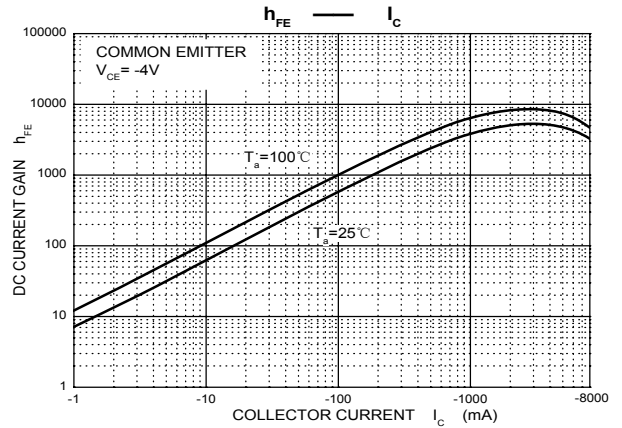
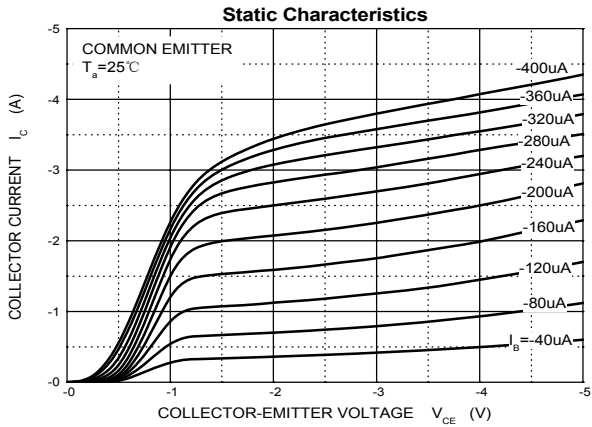
### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

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> =-10mA, 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>B</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(1)</sub>	V <sub>CE</sub> =-4V, I <sub>C</sub> =-4A	1000		12000	
	h <sub>FE(2)</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			300	pF

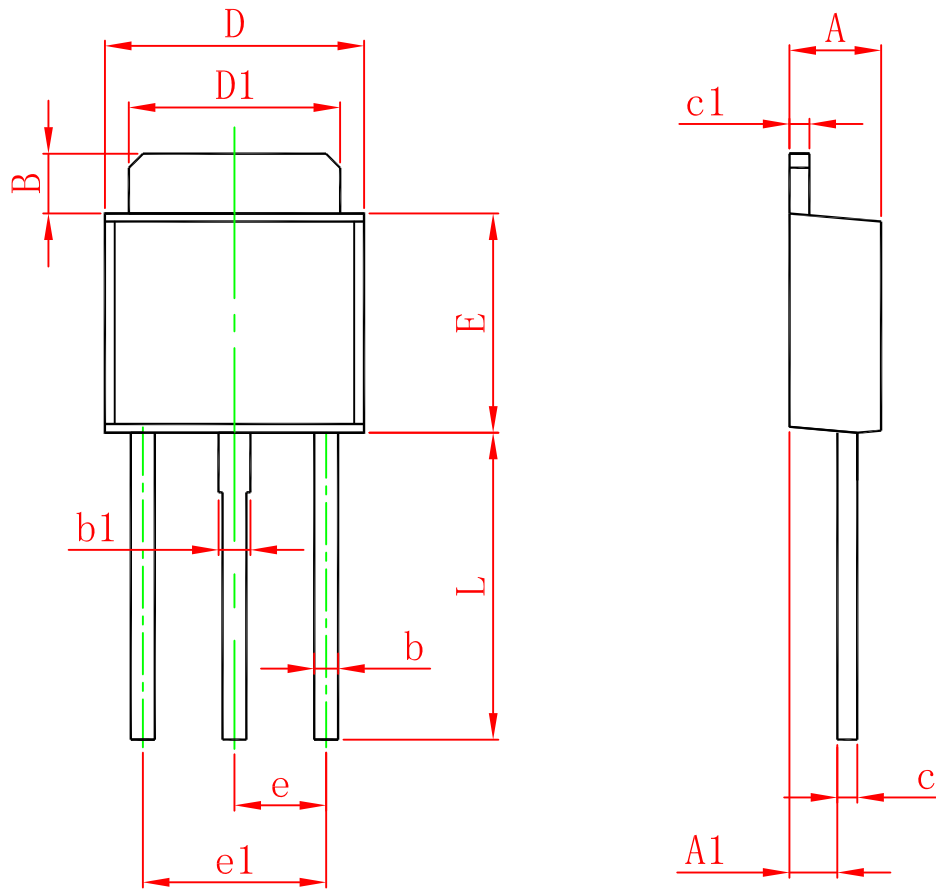
\*Pulse Test: Pulse Width≤380μs, Duty Cycle≤2%

# Typical Characteristics

# MJD127



# TO-251-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	1.050	1.350	0.042	0.054
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP.		0.091 TYP.	
e1	4.500	4.700	0.177	0.185
L	7.500	7.900	0.295	0.311