



Micro Commercial Components

Micro Commercial Components  
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# MJD112

## Silicon NPN epitaxial planer Transistors

### 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
- Built-in a damper diode at E-C
- Maximum Thermal Resistance: 125°C/W Junction to Ambient

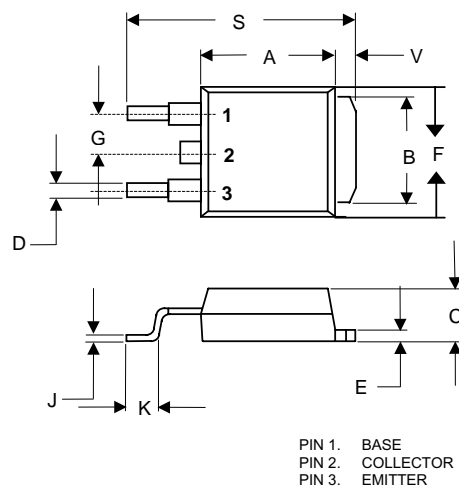
### Maximum Ratings @ 25°C Unless Otherwise Specified

Symbol	Rating	Rating	Unit
V <sub>CEO</sub>	Collector-Emitter Voltage	100	V
V <sub>CBO</sub>	Collector-Base Voltage	100	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current-Continuous	2	A
P <sub>C</sub>	Collector Dissipation	1.0	W
T <sub>J</sub>	Operating Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-55 to +150	°C

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

Symbol	Parameter	Min	Typ	Max	Units
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage (I <sub>C</sub> =30mA, I <sub>B</sub> =0)	100	---	---	Vdc
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage (I <sub>C</sub> =1mA, I <sub>E</sub> =0)	100	---	---	Vdc
V <sub>(BR)EBO</sub>	Collector-Emitter Breakdown Voltage (I <sub>E</sub> =5mA, I <sub>C</sub> =0)	5	---	---	Vdc
I <sub>CBO</sub>	Collector Cutoff Current (V <sub>CB</sub> =100Vdc, I <sub>E</sub> =0)	---	---	20	nAdc
I <sub>CEO</sub>	Collector emitter cutoff Current (V <sub>CE</sub> =50Vdc, I <sub>E</sub> =0)	---	---	20	nAdc
I <sub>EBO</sub>	Emitter Cutoff Current (V <sub>EB</sub> =5Vdc, I <sub>C</sub> =0)	---	---	2	mA
h <sub>FE</sub>	DC Current Gain (I <sub>C</sub> =500mA, V <sub>CE</sub> =3Vdc) (I <sub>C</sub> =2Adc, V <sub>CE</sub> =3Vdc) (I <sub>C</sub> =4Adc, V <sub>CE</sub> =3Vdc)	500 1000 200	---	---	12000
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =2Adc, I <sub>B</sub> =8mA) (I <sub>C</sub> =4Adc, I <sub>B</sub> =40mA)	---	---	2 3	Vdc
f <sub>T</sub>	Transition frequency (V <sub>CE</sub> =10Vdc, f=1MHz, I <sub>C</sub> =0.75A)	25	---	---	MHz
V <sub>BE</sub>	Base-Emitter Saturation Voltage (I <sub>C</sub> =2Adc, V <sub>CE</sub> =3Vdc)	---	---	2.8	Vdc
C <sub>ob</sub>	Output Capacitance (V <sub>CB</sub> =10Vdc, f=0.1MHz, I <sub>E</sub> =0)	---	---	100	pF

### DPAK

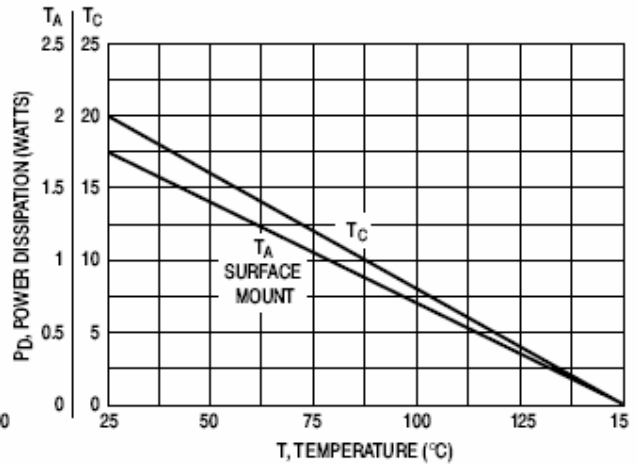
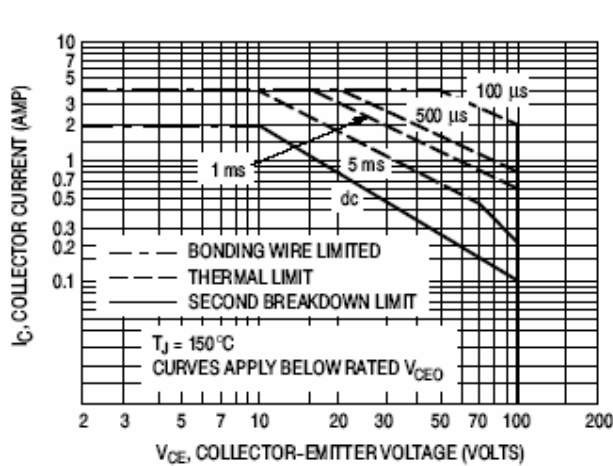
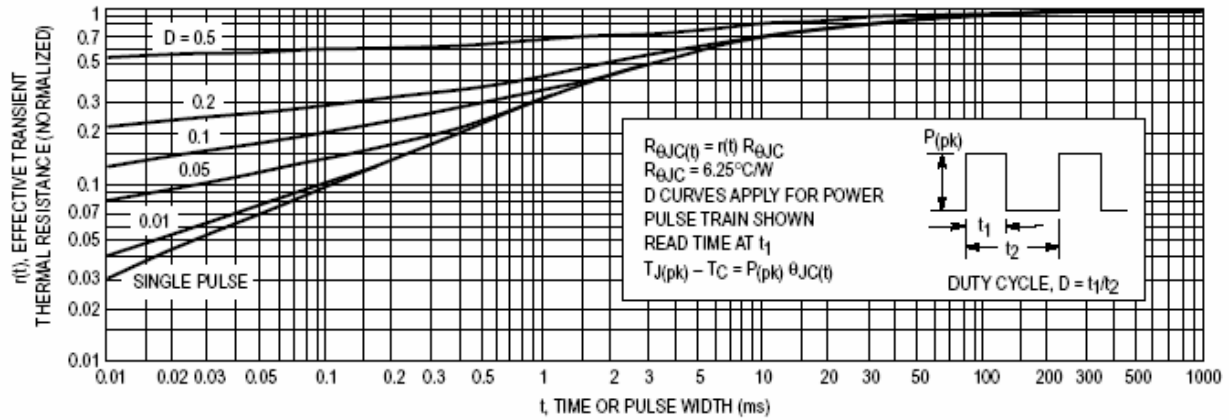


#### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.235	0.245	5.97	6.22	
B	0.205	0.215	5.21	5.46	
C	0.086	0.094	2.19	2.38	
D	0.025	0.035	0.64	0.89	
E	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	

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## Typical Characteristics





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## Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;2500pcs/Reel

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