



Micro Commercial Components

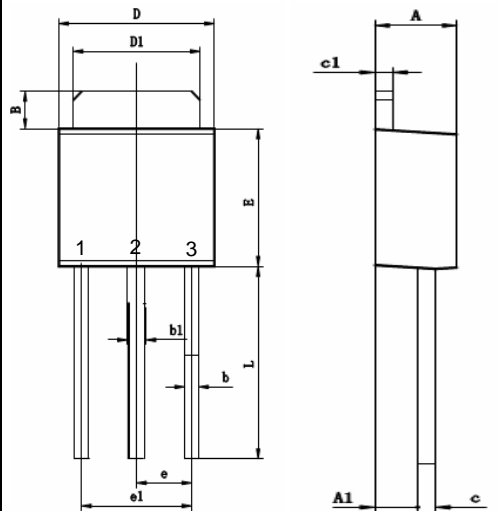


Micro Commercial Components
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MJE13003D

NPN Silicon Plastic-Encapsulate Transistor

TO-251



PIN 1. BASE
PIN 2.4 COLLECTOR
PIN 3. EMITTER

DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.087	.094	2.20	2.40	
A1	.042	.054	1.05	1.35	
B	.053	.065	1.35	1.65	
b	.020	.028	0.50	0.70	
b1	.028	.035	0.70	0.90	
c	.017	.023	0.43	0.58	
c1	.017	.023	0.43	0.58	
D	.250	.262	6.35	6.65	
D1	.205	.213	5.20	5.40	
E	.213	.224	5.40	5.70	
e	0.091TYP		2.300TYP		
e1	.177	.185	4.50	4.70	
L	.295	.311	7.50	7.90	

Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 1.25Watts of Power Dissipation.
- Collector-current 1.5A
- Collector-base Voltage 700V
- Operating and storage junction temperature range: -55°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=10mA, I_B=0$)	400		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=1000\mu A, I_E=0$)	700		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=1000\mu A, I_C=0$)	9.0		Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=700Vdc, I_E=0$)		1000	μA
I_{CEO}	Collector Cutoff Current ($V_{CE}=400Vdc, I_B=0$)		500	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB}=9.0Vdc, I_C=0$)		1000	μA

ON CHARACTERISTICS

$h_{FE(1)}$	DC Current Gain ($I_C=0.5A, V_{CE}=5.0Vdc$)	8.0	40	
$h_{FE(2)}$	DC Current Gain ($I_C=1.5A, V_{CE}=5Vdc$)	5.0		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=1000mA, I_B=250mA$)		1.0	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=1000mA, I_B=250mA$)		1.2	Vdc
V_{BE}	Base-Emitter Voltage ($I_E=2000mA$)		3.0	Vdc

SMALL-SIGNAL CHARACTERISTICS

f_T	Transistor Frequency ($I_C=100mA, V_{CE}=10Vdc, f=1.0MHz$)	5.0		MHz
t_f	Fall Time $V_{CC}=100V, I_C=1.0$		0.5	μS
t_s	Storage Time $A, I_{B1}=I_{B2}=0.2A$		2.5	μS

Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.



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Ordering Information :

Device	Packing
Part Number-BP	Bulk; 80pcs/Tube

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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