

## MJE15032 (NPN), MJE15033 (PNP)

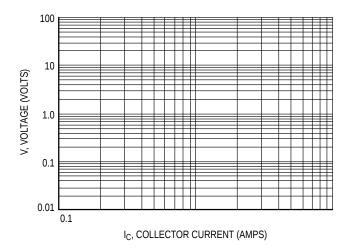
## ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS	·			
Collector–Emitter Sustaining Voltage (Note 1) (I <sub>C</sub> = 10 mAdc, I <sub>B</sub> = 0)	V <sub>CEO(sus)</sub>	250	_	Vdc
Collector Cutoff Current (V <sub>CB</sub> = 250 Vdc, I <sub>E</sub> = 0)	I <sub>CBO</sub>	-	10	μAdc
Emitter Cutoff Current (V <sub>BE</sub> = 5.0 Vdc, I <sub>C</sub> = 0)	I <sub>EBO</sub>	-	10	μAdc
ON CHARACTERISTICS (Note 1)				
DC Current Gain $(I_C = 0.5 \text{ Adc}, V_{CE} = 5.0 \text{ Vdc})$ $(I_C = 1.0 \text{ Adc}, V_{CE} = 5.0 \text{ Vdc})$ $(I_C = 2.0 \text{ Adc}, V_{CE} = 5.0 \text{ Vdc})$	h <sub>FE</sub>	70 50 10		-
Collector–Emitter Saturation Voltage (I <sub>C</sub> = 1.0 Adc, I <sub>B</sub> = 0.1 Adc)	V <sub>CE(sat)</sub>	-	0.5	Vdc
Base–Emitter On Voltage ( $I_C = 1.0 \text{ Adc}$ , $V_{CE} = 5.0 \text{ Vdc}$ )	V <sub>BE(on)</sub>	-	1.0	Vdc
DYNAMIC CHARACTERISTICS			•	•
Current Gain – Bandwidth Product (Note 2) (I <sub>C</sub> = 500 mAdc, V <sub>CE</sub> = 10 Vdc, f <sub>test</sub> = 1.0 MHz)	f⊤	30	_	MHz

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

1. Pulse Test: Pulse Width  $\leq$  300  $\mu$ s, Duty Cycle  $\leq$  2.0%.

2.  $f_T = |h_{fe}| \cdot f_{test}$ .

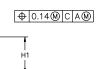


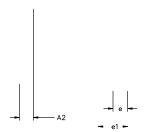


## TO-220-3 10.10x15.12x4.45, 2.54P CASE 221A ISSUE AL

DATE 05 FEB 2025

Α





## ⊕ 0.15 M C A M

DIM         MIN         NOM         MAX           A         4.07         4.45         4.83           A1         1.15         1.28         1.41           A2         2.04         2.42         2.79           b         1.15         1.34         1.52           b1         0.64         0.80         0.96           c         0.36         0.49         0.61           D         9.66         10.10         10.53           D1         8.43         8.63         8.83           E         14.48         15.12         15.75           E1         12.58         12.78         12.98	MILLIMETERS				
A1 1.15 1.28 1.41  A2 2.04 2.42 2.79  b 1.15 1.34 1.52  b1 0.64 0.80 0.96  c 0.36 0.49 0.61  D 9.66 10.10 10.53  D1 8.43 8.63 8.83  E 14.48 15.12 15.75	DIM	MIN	NOM	MAX	
A2     2.04     2.42     2.79       b     1.15     1.34     1.52       b1     0.64     0.80     0.96       c     0.36     0.49     0.61       D     9.66     10.10     10.53       D1     8.43     8.63     8.83       E     14.48     15.12     15.75	Α	4.07	4.45	4.83	
b 1.15 1.34 1.52 b1 0.64 0.80 0.96 c 0.36 0.49 0.61 D 9.66 10.10 10.53 D1 8.43 8.63 8.83 E 14.48 15.12 15.75	A1	1.15	1.28	1.41	
b1     0.64     0.80     0.96       c     0.36     0.49     0.61       D     9.66     10.10     10.53       D1     8.43     8.63     8.83       E     14.48     15.12     15.75	A2	2.04	2.42	2.79	
c     0.36     0.49     0.61       D     9.66     10.10     10.53       D1     8.43     8.63     8.83       E     14.48     15.12     15.75	b	1.15	1.34	1.52	
D 9.66 10.10 10.53 D1 8.43 8.63 8.83 E 14.48 15.12 15.75	b1	0.64	0.80	0.96	
D1 8.43 8.63 8.83 E 14.48 15.12 15.75	С	0.36	0.49	0.61	
E 14.48 15.12 15.75	D	9.66	10.10	10.53	
	D1	8.43	8.63	8.83	
E1 12.58 12.78 12.98	E	14.48	15.12	15.75	
	E1	12.58	12.78	12.98	
E2 1.27 REF	E2	1.27 REF			

MILLIMETERS					
DIM	MIN	NOM	MAX		
е	2.42	2.5			
			J		
Q	2.54	2.79	3.04		
øΡ	3.60	3.85	4.09		
Z			3.48		

NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.

Υ	1 1. 2.	Y 2 1. 2.	Y	Y 1 1 2
			· ·	. 2
Υ	5 1. 2. . U	Y 6. i. 2.	Y	Y i. 2. / Y
Υ	9 1. 2.	Y 10 1. 2. U	Y 11 1. 2. U	Y 12 1. 1 2. 2

