

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS

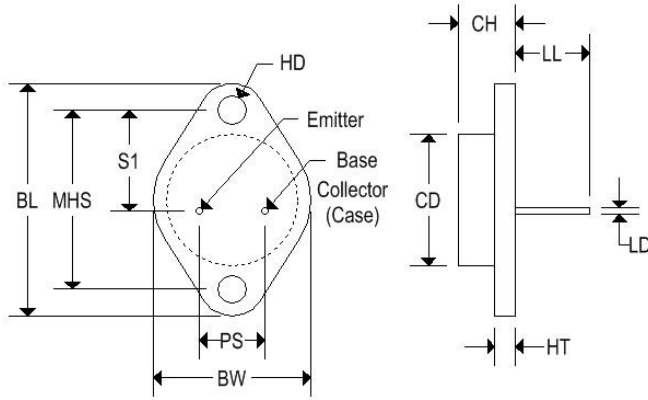
Rating	Symbol	MJ431	Unit
Collector emitter voltage	$V_{CE0}$	400	Vdc
Collector base voltage	$V_{CBO}$	400	Vdc
Emitter base voltage	$V_{EB}$	5.0	Vdc
Collector current-Continuous	$I_C$	10	Adc
Base current	$I_B$	2.0	Adc
Total power dissipation @ $T_C = 25^\circ\text{C}$	$P_D$	125	W
Operating temperature	$T_J$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-65 to +200	$^\circ\text{C}$
Thermal resistance, junction to case	$R_{\theta JC}$	1.0	$^\circ\text{C/W}$

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Characteristic	Symbol	Min	Max	Unit
Collector emitter sustaining voltage ( $I_C = 50\text{mA}$ , $I_B = 0$ )	$V_{CE0(sus)}$	325	-	Vdc
Collector emitter saturation voltage ( $I_C = 2.5\text{Adc}$ , $I_B = 0.5\text{Adc}$ )	$V_{CE(sat)}$	-	0.7	Vdc
Base emitter saturation voltage ( $I_C = 2.5\text{Adc}$ , $I_B = 0.5\text{Adc}$ )	$V_{BE(sat)}$	-	1.5	Vdc
Collector cutoff current ( $V_{CB} = 400\text{Vdc}$ , $I_E = 0$ ) ( $V_{CB} = 400\text{Vdc}$ , $I_E = 0$ , $T_C = 125^\circ\text{C}$ )	$I_{CBO}$	- -	2.5 5.0	mA
Emitter cutoff current ( $V_{EB} = 5\text{Vdc}$ , $I_C = 0$ )	$I_{EBO}$	-	2.0	mAdc
DC current gain ( $I_C = 2.5\text{Adc}$ , $V_{CE} = 5\text{Vdc}$ ) ( $I_C = 3.0\text{Adc}$ , $V_{CE} = 5\text{Vdc}$ )	$h_{FE}$	15 10	35 -	-
Current gain- bandwidth product ( $I_C = 200\text{mAdc}$ , $V_{CE} = 10\text{Vdc}$ , $f = 1\text{MHz}$ )	$f_T$	2.5	-	MHz

**MECHANICAL CHARACTERISTICS**

Case	TO-3
Marking	Alpha-numeric
Polarity	See below



	TO-3			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	-	0.875	-	22.220
CH	0.250	0.380	6.860	9.650
HT	0.060	0.135	1.520	3.430
BW	-	1.050	-	26.670
HD	0.131	0.188	3.330	4.780
LD	0.038	0.043	0.970	1.090
LL	0.312	0.500	7.920	12.700
BL	1.550 REF		39.370 REF	
MHS	1.177	1.197	29.900	30.400
PS	0.420	0.440	10.670	11.180
S1	0.655	0.675	16.640	17.150