

# TO-92 Plastic-Encapsulate Transistors

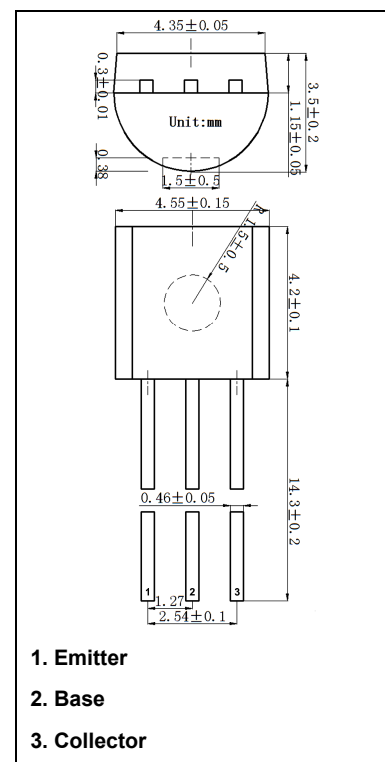
## A42H331 NPN Transistors

### Features

- High Voltage

### Maximum Ratings ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CB0}$	Collector Base Voltage	310	V
$V_{CEO}$	Collector Emitter Voltage	305	V
$V_{EBO}$	Emitter Base Voltage	5	V
$I_C$	Collector Current	500	mA
$P_C$	Collector Power Dissipation	625	mW
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	- 55 to +150	$^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	200	$^\circ\text{C}/\text{mW}$
$R_{\theta JC}$	Thermal Resistance, junction to Case	83.3	$^\circ\text{C}/\text{mW}$



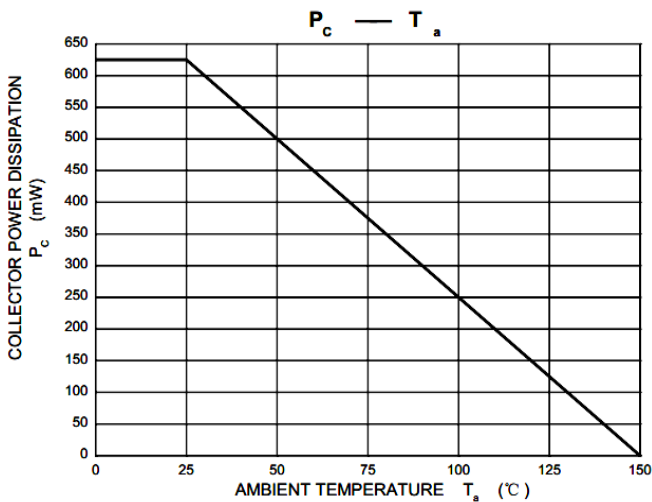
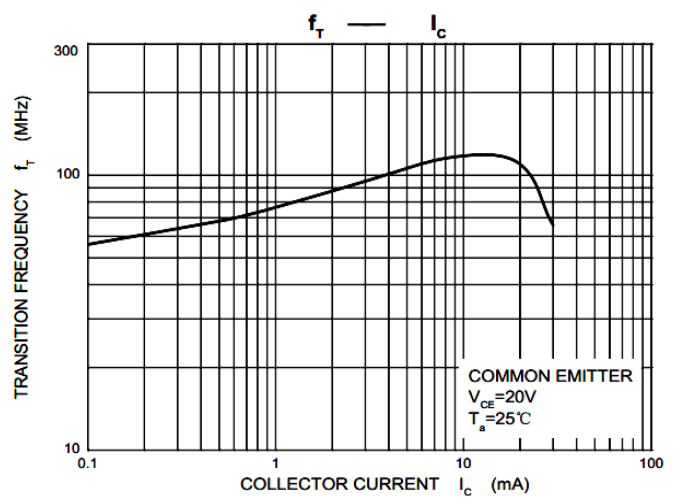
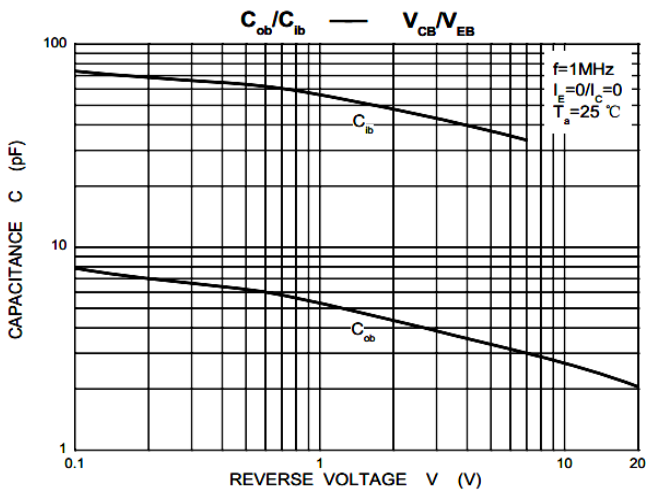
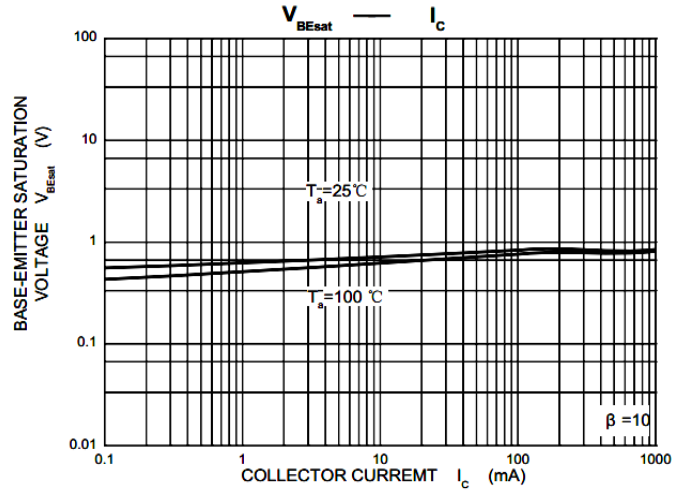
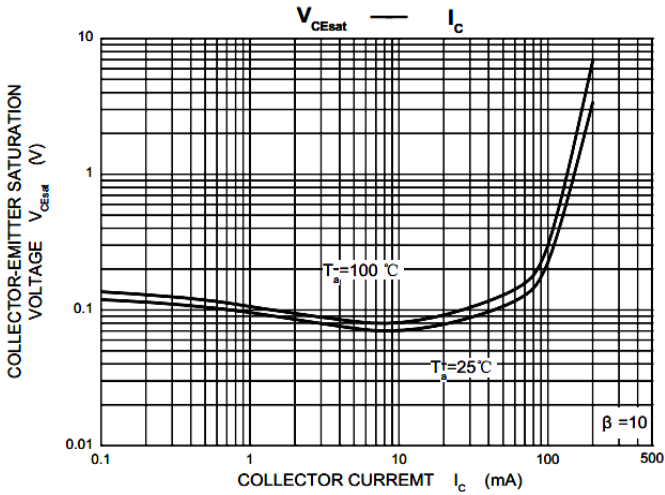
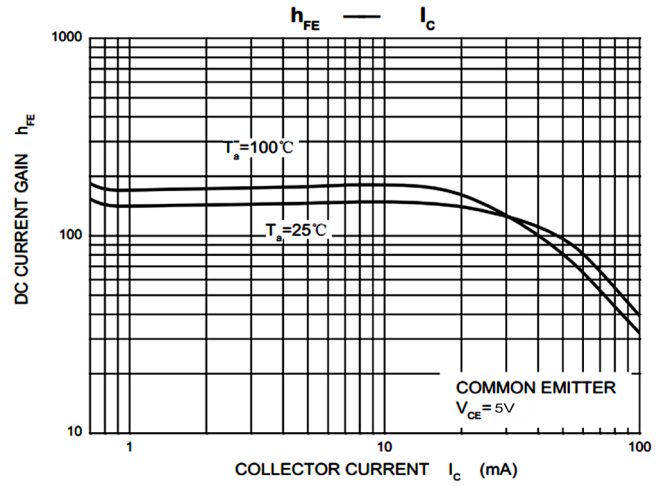
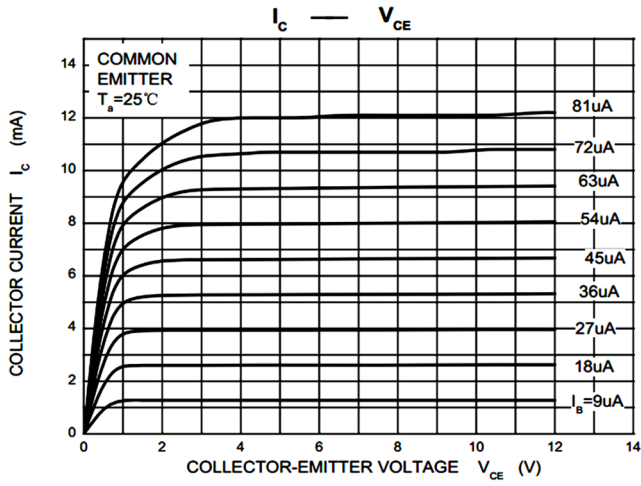
### Electrical Characteristics ( $T_a=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CB0}$	Collector-base breakdown voltage	$I_C = 100\mu\text{A}, I_E = 0$	310			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = 1\text{mA}, I_B = 0$	305			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = 100\mu\text{A}, I_C = 0$	5			V
$I_{CB0}$	Collector cut-off current	$V_{CB} = 200\text{V}, I_E = 0$			0.25	$\mu\text{A}$
$I_{EBO}$	Emitter cut-off current	$V_{EB} = 5\text{V}, I_C = 0$			0.1	$\mu\text{A}$
$h_{FE(1)}$	DC current gain	$V_{CE} = 5\text{V}, I_C = 1\text{mA}$	80			
$h_{FE(2)}$		$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	80			
$h_{FE(3)}$		$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	60			
$h_{FE(4)}$		$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	80		200	
$h_{FE(5)}$		$V_{CE} = 10\text{V}, I_C = 30\text{mA}$	75			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 20\text{mA}, I_B = 2\text{mA}$			0.2	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = 20\text{mA}, I_B = 2\text{mA}$			0.9	V
$f_T$	Transition frequency	$V_{CE} = 20\text{V}, I_C = 10\text{mA}, f = 30\text{MHz}$	50			MHz

### Classification OF $h_{FE(1)}$

Rank	A	B
Range	80-150	150-200

# Typical Characteristics



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Bipolar Transistors - BJT category](#):*

*Click to view products by [ALJ manufacturer](#):*

Other Similar products are found below :

[BC559C](#) [MCH4017-TL-H](#) [MMBT-2369-TR](#) [BC546/116](#) [NJVMJD148T4G](#) [NTE16](#) [NTE195A](#) [IMX9T110](#) [2N4401-A](#) [2N6728](#) [2SA1419T-TD-H](#) [2SB1204S-TL-E](#) [2SC5488A-TL-H](#) [FMC5AT148](#) [2N2369ADCSM](#) [2N2907A](#) [2N3904-NS](#) [2N5769](#) [2SC4618TLN](#) [CPH6501-TL-E](#) [BC856BW-13-F](#) [US6T6TR](#) [BAX18/A52R](#) [BC556/112](#) [IMZ2AT108](#) [MMST8098T146](#) [MCH6102-TL-E](#) [2N3879](#) [30A02MH-TL-E](#) [NTE13](#) [NTE282](#) [NTE323](#) [NTE350](#) [NTE81](#) [JANTX2N2920L](#) [JANSR2N2907AUB](#) [CMLT3946EG TR](#) [SNSS40600CF8T1G](#) [CMLT3906EG TR](#) [GRP-DATA-JANS2N2907AUB](#) [GRP-DATA-JANS2N2222AUA](#) [MMDT3946FL3-7](#) [2N4240](#) [JANS2N3019](#) [MSB30KH-13](#) [2N2221AUB](#) [2SD1815T-TL-E](#) [2N6678](#) [2N2907Ae4](#) [JAN2N3507](#)