

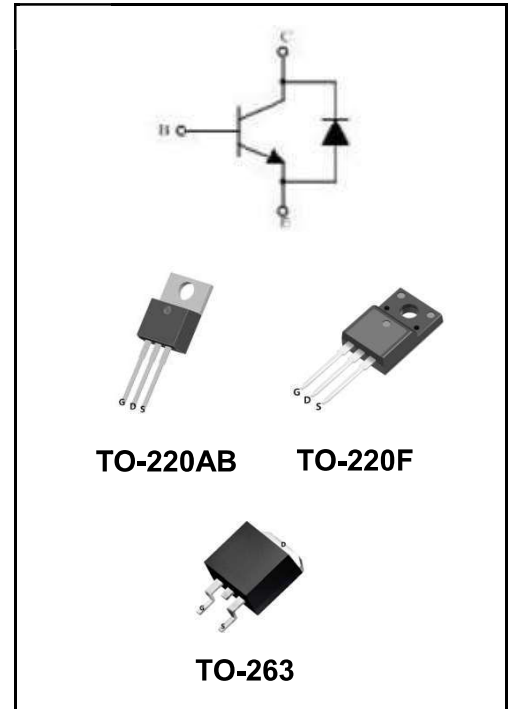
NPN Silicon Epitaxial Planar Transistor

Features

- ◆ High voltage
- ◆ High speed switching

Mechanical Data

- ◆ Case: Molded plastic
- ◆ Polarity: As marked
- ◆ Mounting Position: Any
- ◆ Molded Plastic: UL Flammability Classification Rating 94V-0
- ◆ Lead free in compliance with EU RoHS 2011/65/EU directive
- ◆ Solder bath temperature 275°C maximum, 10s per JESD22-106



Product Specification Classification

Part Number	Package	Marking	Pack
YFW13005AT	TO-220AB	YFW 13005AT XXXXX	1000PCS/box
YFW13005AF	TO-220F(0.5mm)	YFW 13005AF XXXXX	1000PCS/box
YFW13005AS	TO-263	YFW 13005AS XXXXX	800PCS/Reel

Maximum Ratings At Ta=25°C Unless Otherwise Specified

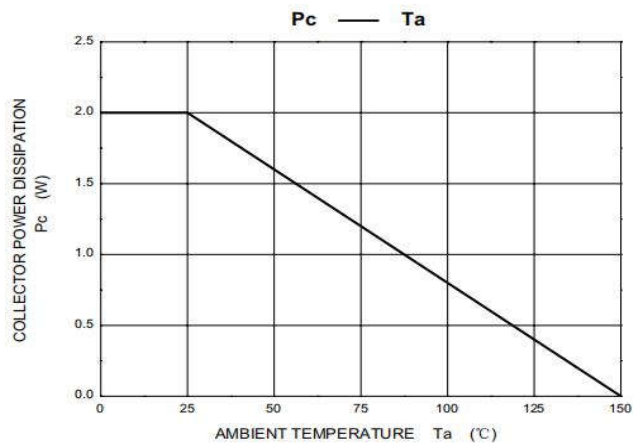
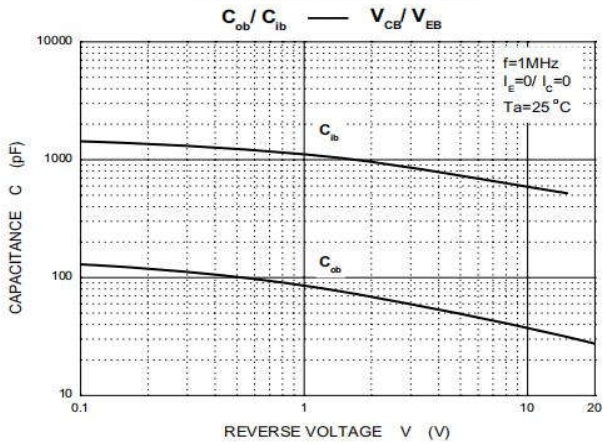
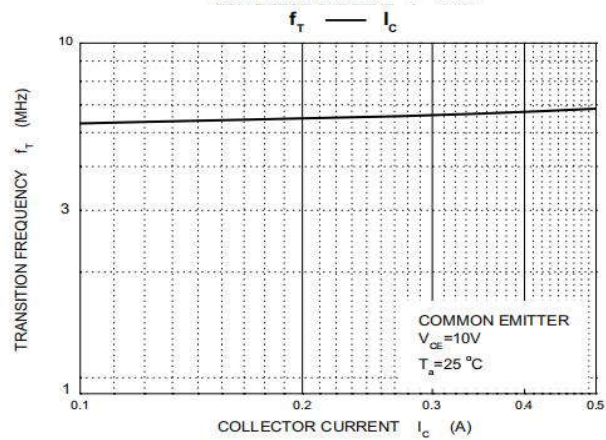
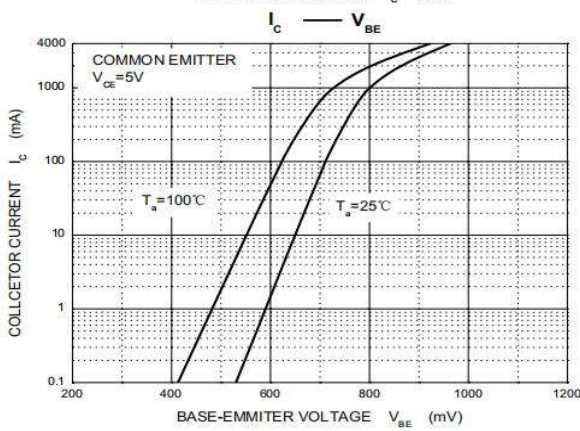
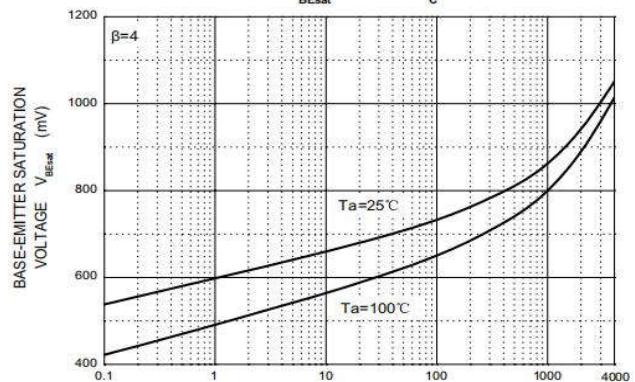
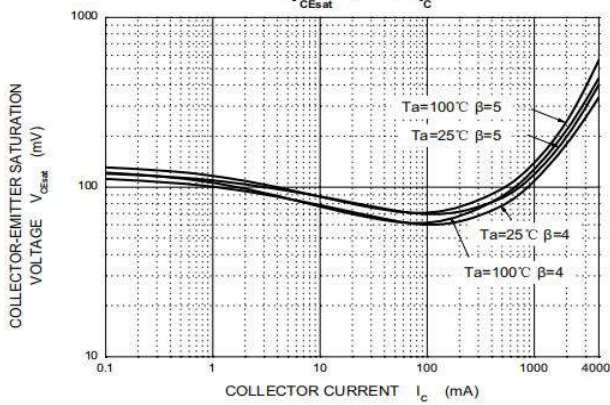
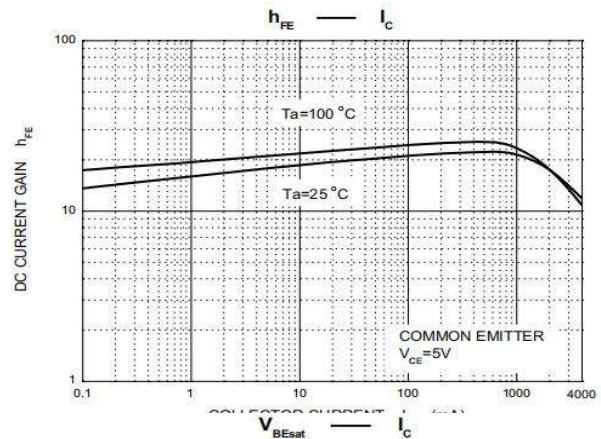
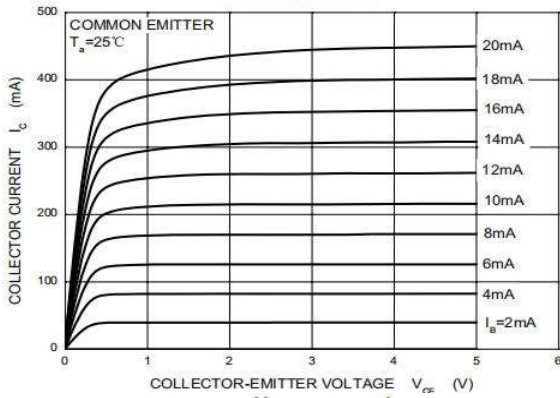
Characteristics	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	700	V
Collector Emitter Voltage	V_{CEO}	400	V
Emitter Base Voltage	V_{EBO}	9	V
Collector Current	I_C	4	A
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	62.5	°C/W
Power Dissipation (Tc = 25 °C) Superimposed on Rated Load (JEDEC method)	P_{tot}	2	W
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 5 V, I_C = 1 A$	h_{FE}	15	-	35	-
Collector Base Cutoff Current at $V_{CB} = 700 V$	I_{CBO}	-	-	10	μA
Collector Emitter Cutoff Current at $V_{CE} = 400 V$	I_{CEO}	-	-	10	μA
Emitter Base Cutoff Current at $V_{EB} = 7 V$	I_{EBO}	-	-	10	μA
Collector Emitter Saturation Voltage at $I_C = 2 A, I_B = 0.4A$	$V_{CE(sat)}$	-	-	1	V
Base Emitter Saturation Voltage at $I_C = 4A, V_{CE} = 1V$	$V_{BE(sat)}$	-	-	0.8	V
Transition Frequency at $V_{CE}=10V, I_C=500mA, f=1MHZ$	f_T	4	-	-	MHZ

Ratings And Characteristic Curves

Static Characteristic



Package Outline Dimensions millimeters

TO-220AB

	Dim.	Min.	Max.
	A	10.15	10.35
	B	2.65	2.95
	C	3.70	3.90
	D	28.5	29.5
	E	1.30	1.45
	F	6.35	6.55
	G	2.9	3.3
	H	15.0	16.0
	I	0.38	0.42
	J	4.45	4.55
	K	1.25	1.35
	L	Typ 5.08	
	M	Typ 2.54	
N	3.1	3.3	
O	0.76	0.84	
All Dimensions in millimeter			

TO-220F

	Dim.	Min.	Max.
	A	9.95	10.25
	B	2.95	3.25
	C	1.25	1.45
	D	12.95	13.25
	E	0.50	0.65
	F	3.1	3.3
	G	1.30	1.45
	H	Typ 2.54	
	I	Typ 5.08	
	J	4.60	4.75
	K	2.50	2.65
	L	6.35	6.55
	M	15.4	16.0
	N	2.75	3.05
	O	0.48	0.52
P	0.76	0.84	
All Dimensions in millimeter			

Package Outline Dimensions millimeters

TO-263

