

NPN Silicon Epitaxial Planar Transistor

Features

- ◆ High voltage
- ◆ High speed switching

APPLICATIONS

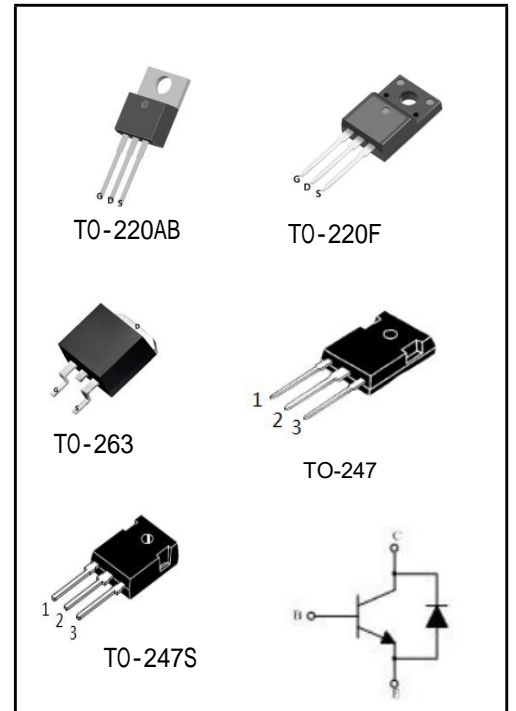
- ◆ ELECTRONIC TRANSFORMER
- ◆ SWITCH MODE POWER SUPPLY

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
YFW13009AT	TO-220AB	YFW 13009AT XXXXX	1000PCS/Box
YFW13009AF	TO-220F	YFW 13009AF XXXXX	1000PCS/Box
YFW13009AS	TO-263	YFW 13009AS XXXXX	800PCS/Reel
YFW13009AS-G	TO-263	YFW 13009AS XXXXX	50PCS/Tube
YFW13009PT	TO-247	YFW 13009PT XXXXX	1000PCS/Box
YFW13009PTS	TO-247S	YFW 13009PT XXXXX	1000PCS/Box



Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Symbols	Value			Units
		220AB/263	220F	247	
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	12			A
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	1.56			°C/W
Power Dissipation (Tc = 25 °C) Superimposed on Rated Load (JEDEC method)	P_{tot}	3			W
Operating Temperature Range	T_J	150			°C
Storage Temperature Range	T_{STG}	-55 to +150°C			°C

Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Test Condition	Symbols	Min	Typ	Max	Units
DC Current Gain	at $V_{CE} = 5V, I_C = 3A$	h_{FE}	8	-	40	-
Collector Base Cutoff Current	at $V_{CB} = 700V$	I_{CBO}	-	-	100	μA
Collector Emitter Cutoff Current	at $V_{CE} = 400V$	I_{CEO}	-	-	100	μA
Emitter Base Cutoff Current	at $V_{EB} = 9V$	I_{EBO}	-	-	100	μA
Collector Emitter Saturation Voltage	at $I_C = 5A, I_B = 1A$	$V_{CE(sat)}$	-	-	1	V
Base Emitter Saturation Voltage	at $I_C = 4A, V_{CE} = 1V$	$V_{BE(sat)}$	-	-	1.6	V
Transition Frequency	at $V_{CE}=10V, I_C=500mA, f=1MHZ$	f_T	4	-	-	MHZ

Ratings And Characteristic Curves

Fig1 SOA (DC)

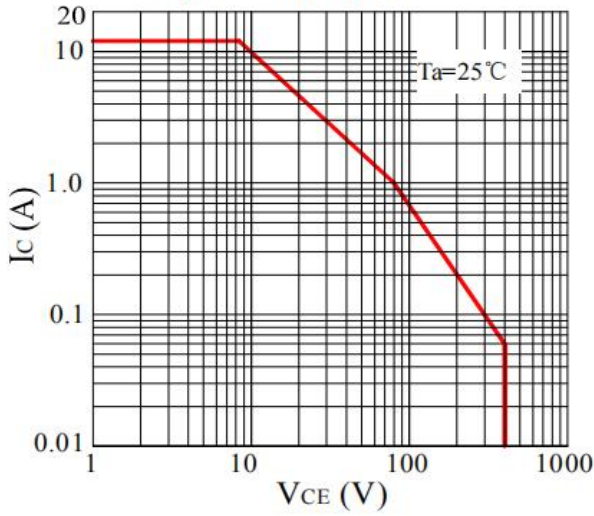


Fig2 Ptot - T

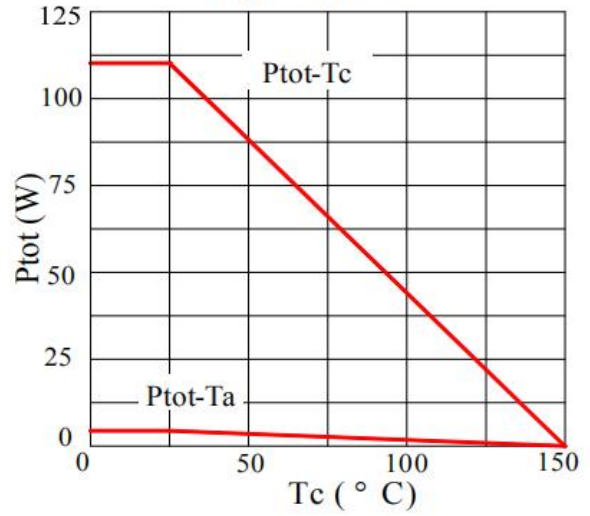


Fig3 Static Characteristic

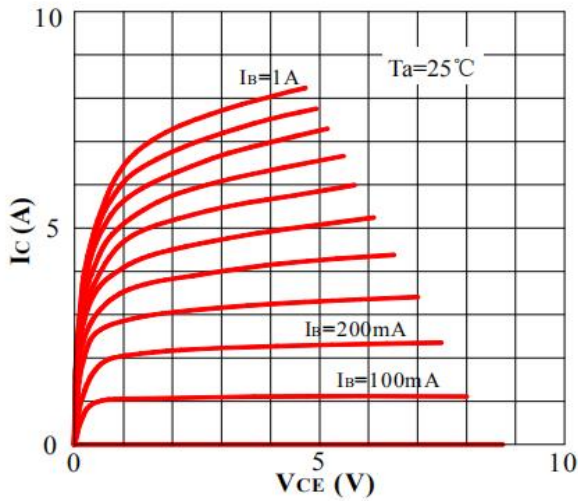
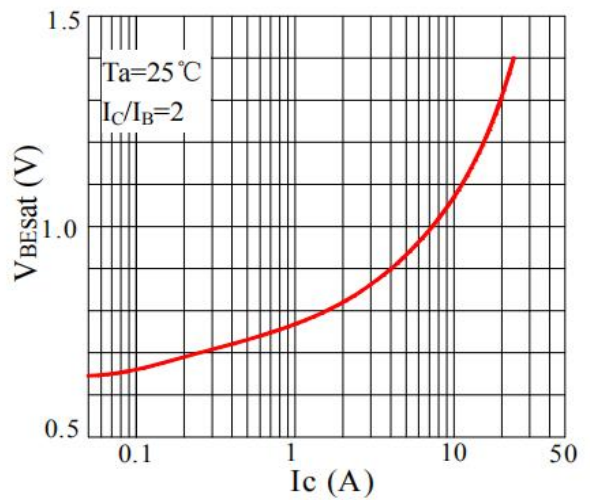
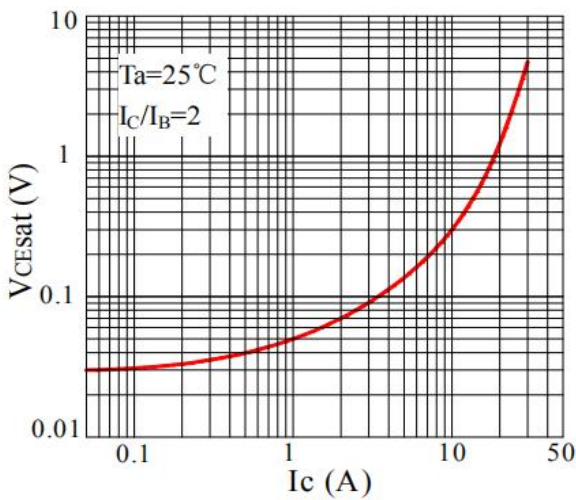
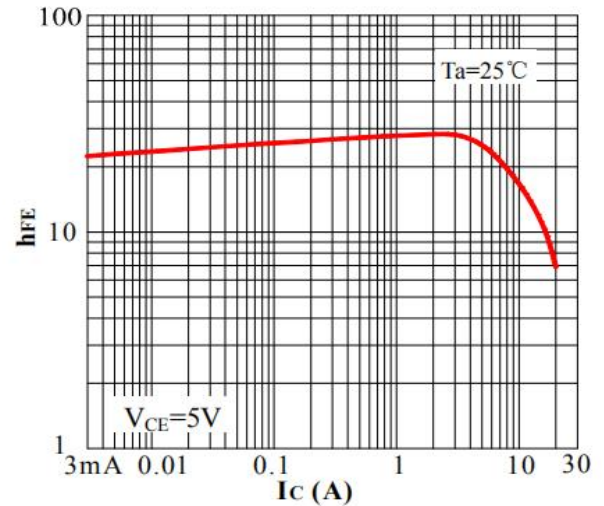
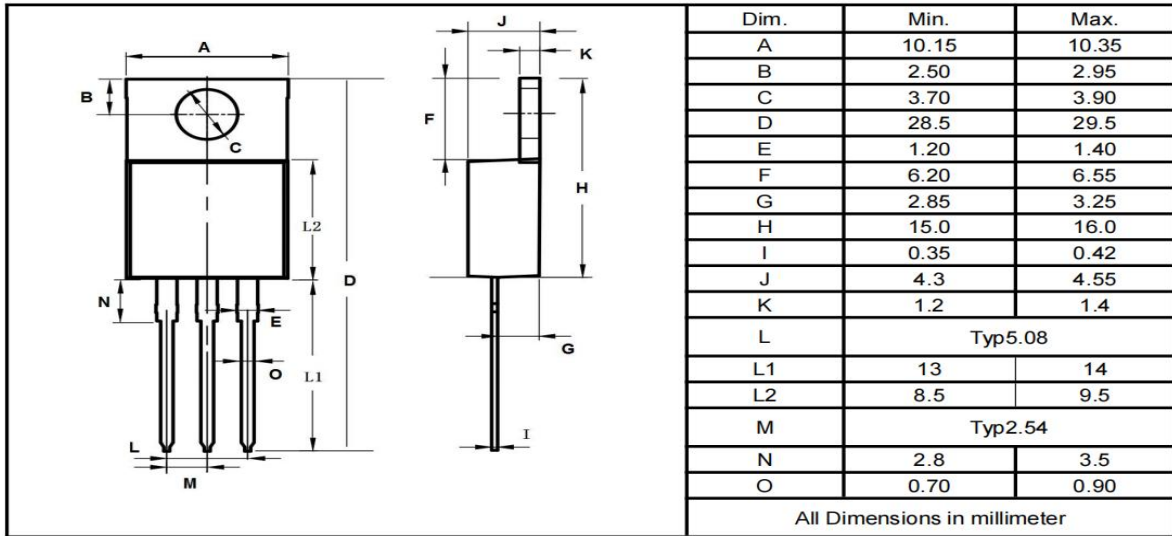


Fig4 hFE-Ic

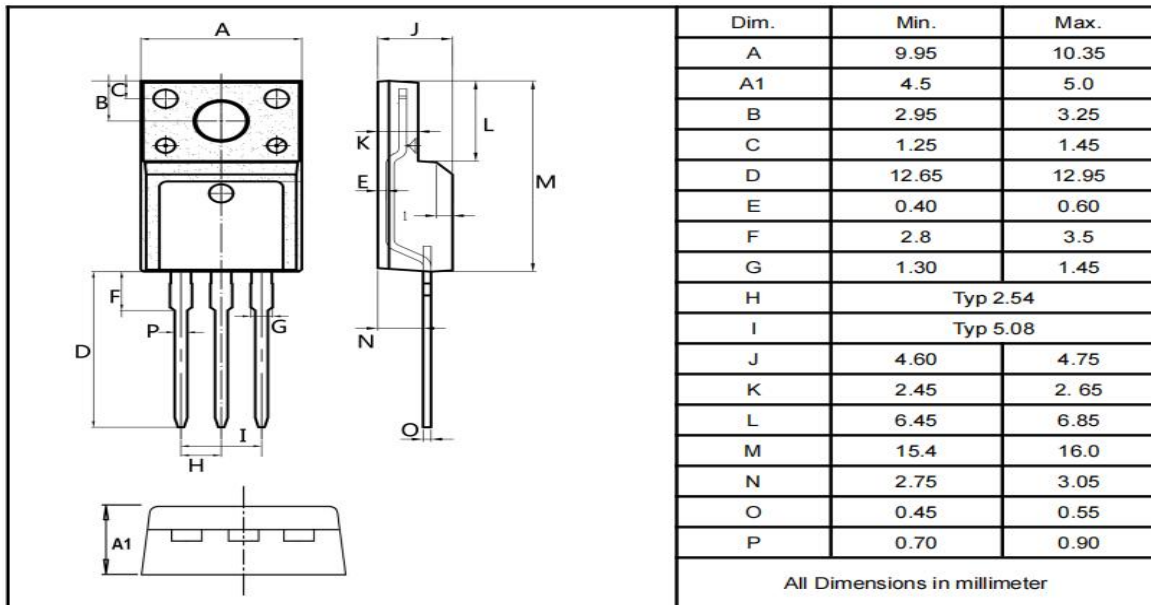


Package Outline Dimensions millimeters

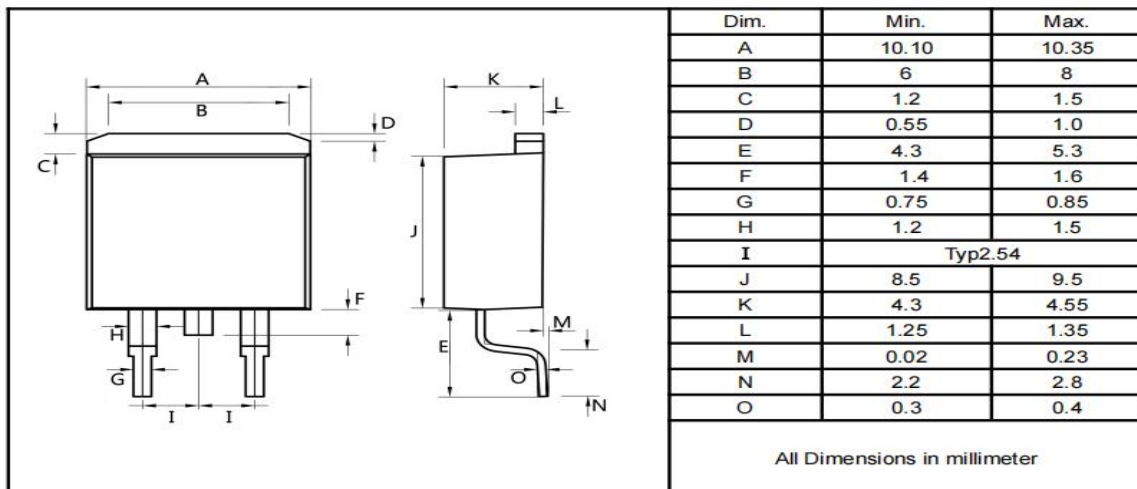
TO-220AB



TO-220F

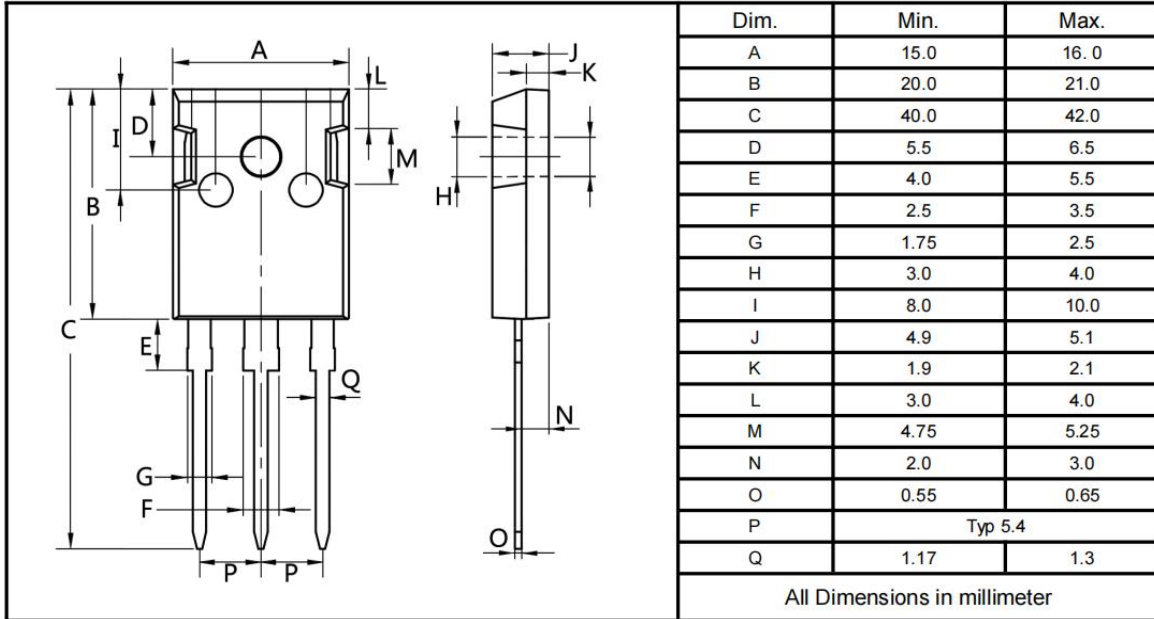


TO-263

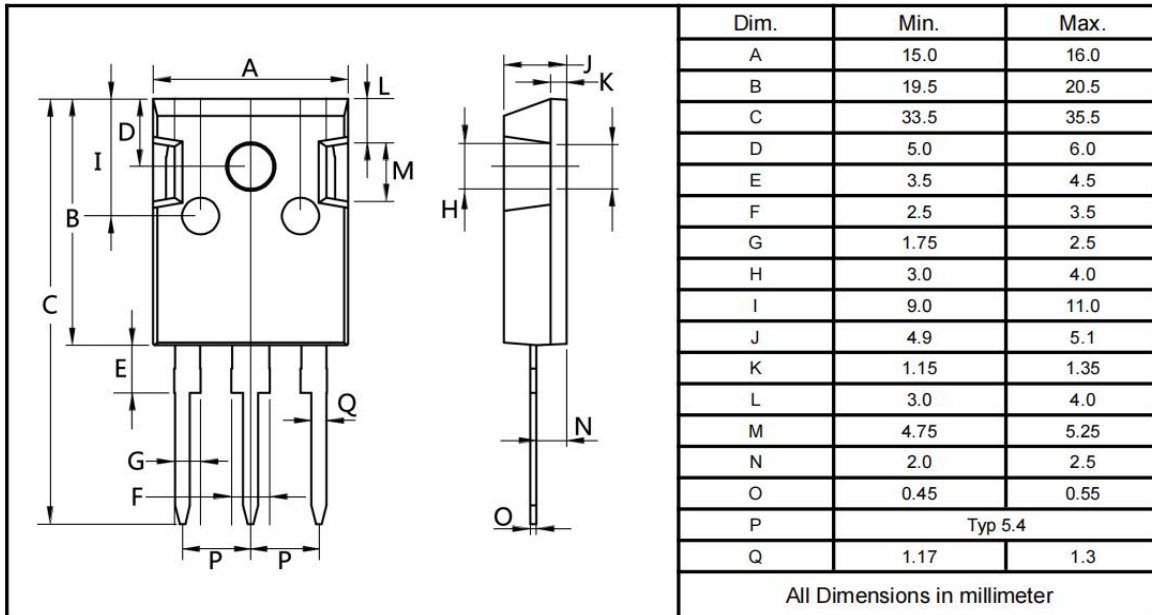


Package Outline Dimensions millimeters

TO-247



TO-247S



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 [YFW Electronics 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](#) [US6T6TR](#) [BAX18/A52R](#) [BC556/112](#) [IMZ2AT108](#) [MMST8098T146](#) [MCH6102-TL-E](#) [BC846B-13-F](#) [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](#)