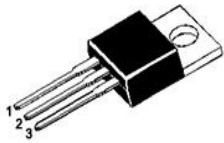
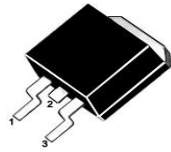




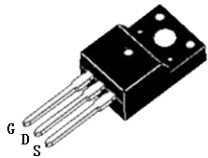
## NPN Silicon Epitaxial Planar Transistor



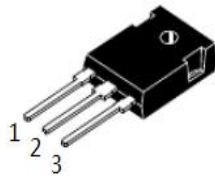
TO-220



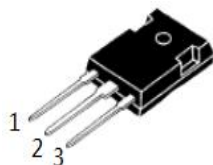
TO-263



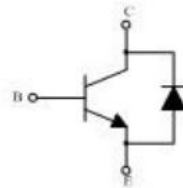
TO-220F



TO-247S



TO-247



### FEATURES

- High voltage
- High speed switching



RoHS  
COMPLIANT  
HALOGEN  
FREE

### 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 JESD 22-B106

### Product specification classification

Part Number	Package	Mode Name	Pack
LX13009A1	TO-220AB	LX13009A	Tube
LX13009A2	TO-220F (0.5mm)	LX13009A	Tube
LX13009A3	TO-263	LX13009A	Tube
LX13009A6	TO-247	LX13009A	Tube
LX13009A7	TO-247S	LX13009A	Tube

### 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	$I_C$	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

### Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
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)

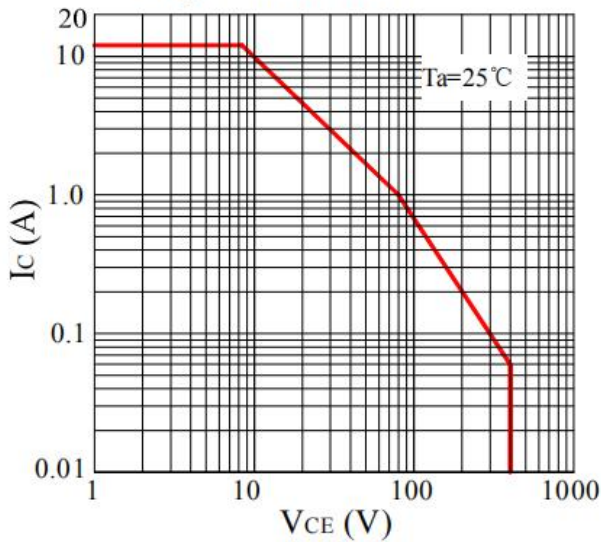


Fig2 Ptot - T

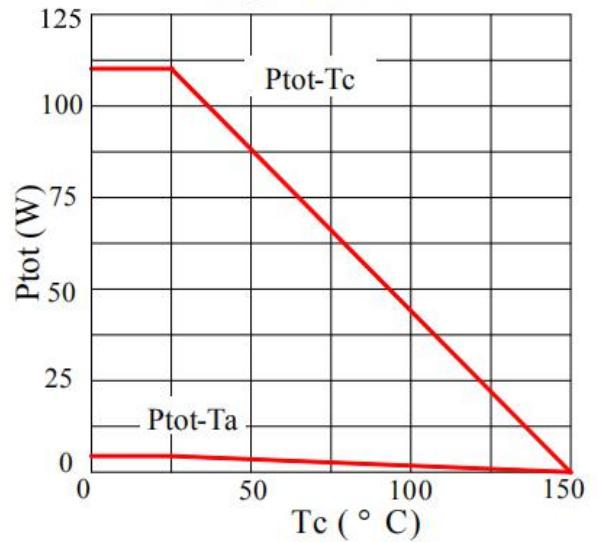


Fig3 Static Characteristic

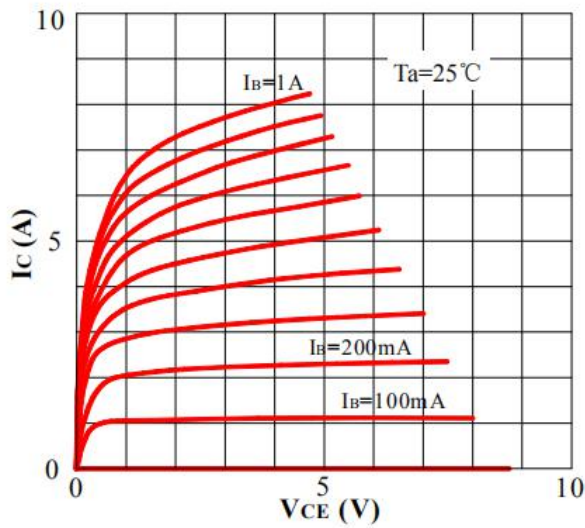
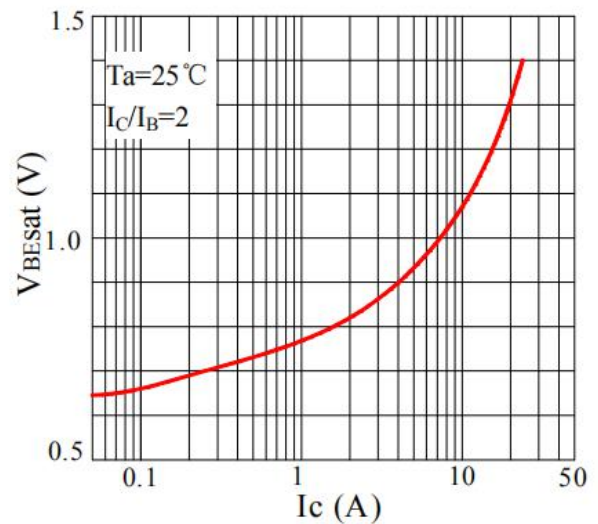
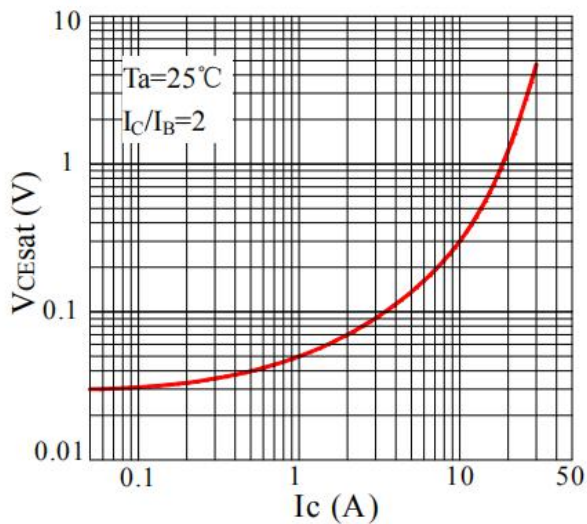
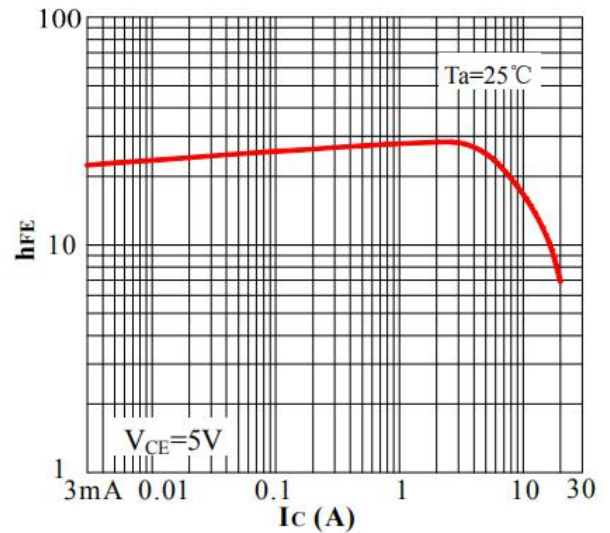


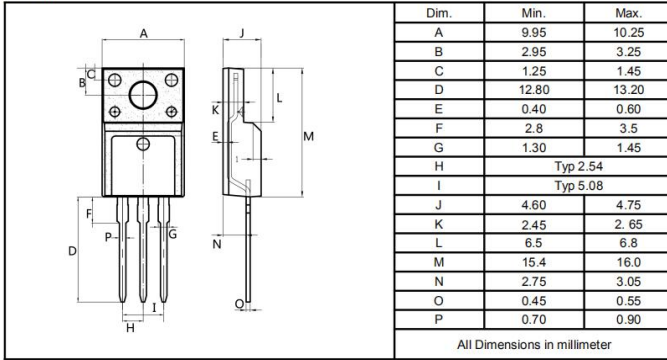
Fig4 hFE-Ic



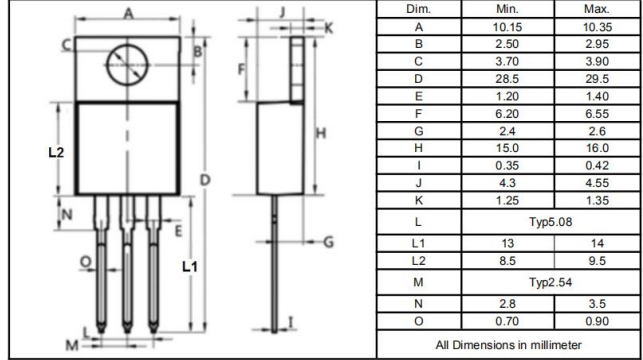


Package Outline Dimensions millimeters

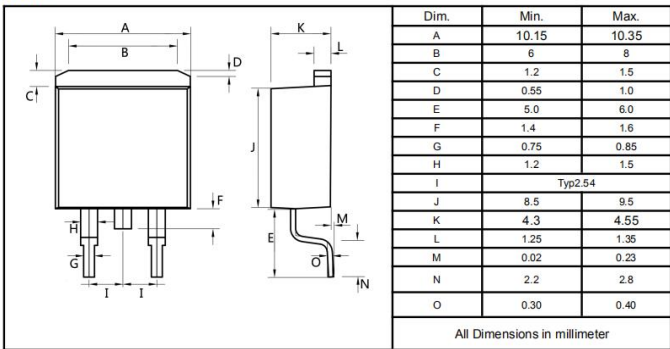
TO-220F



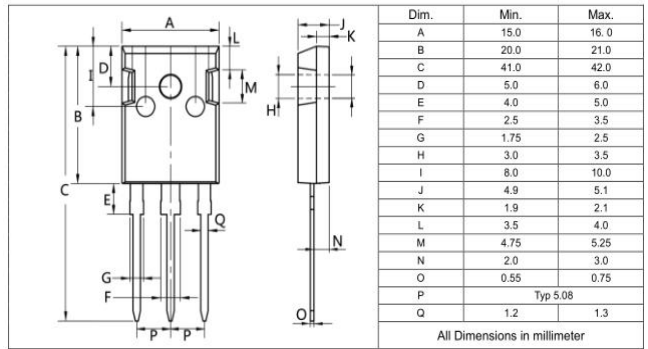
TO-220AB



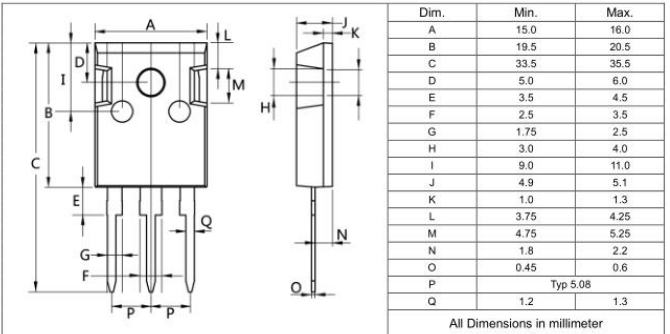
TO-263



TO-247



TO-247S



Notice

1. All product,product specifications and data are subject to change without notice to improve.The right to explain is owned by LINGXUN electronics company.
2. Confirm that operation temperature is within the specified range described in the product specification. Avoid applying power exceeding normal rated power; exceeding the power rating under steady-state loading condition may negatively affect product performance and reliability.
3. LINGXUN electronics shall not be in any way responsible or liable for failure induced under deviant condition from what is defined in this document.