

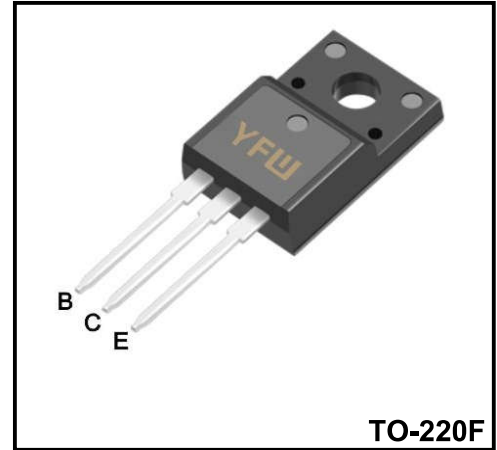
NPN Plastic-Encapsulate Transistors

Applications

- ◆ Power Amplifier
- ◆ Driver Stage Amplifier

Features

- ◆ High transition frequency: $f_T = 100 \text{ MHz (typ.)}$
- ◆ Complements the 2SA1837



TO-220F

Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	230	V
Collector-Emitter Voltage	BV_{CEO}	230	V
Emitter-Base Voltage	BV_{EBO}	5	V
Collector Current	I_C	1	A
Base current	I_B	0.1	A
Collector Power Dissipation	P_C	Ta=25°C	2
		Tc=25°C	20
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~150	°C

* $PW \leq 10\text{ms}$, Duty Cycle $\leq 50\%$

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage	BV_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	230			V
Collector-emitter voltage	BV_{CEO}	$I_C = 10\text{mA}$, $I_B = 0$	230			V
Emitter-base voltage	BV_{EBO}	$I_E = 100\mu\text{A}$, $I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 230\text{V}$, $I_E = 0$			1.0	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			1.0	μA
DC current gain	h_{FE}	$V_{CE} = 5\text{V}$, $I_C = 100\text{mA}$	100		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$			1.5	V
Base -emitter voltage	V_{BE}	$V_{CE} = 5\text{V}$, $I_C = -500\text{mA}$			1.0	V
Transition frequency	f_T	$V_{CE} = 10\text{V}$, $I_C = 100\text{mA}$		100		MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		30		pF

Typical Characteristics

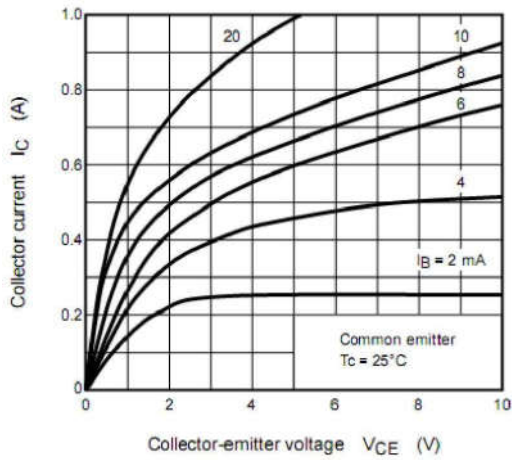


Figure 1. Static characteristics

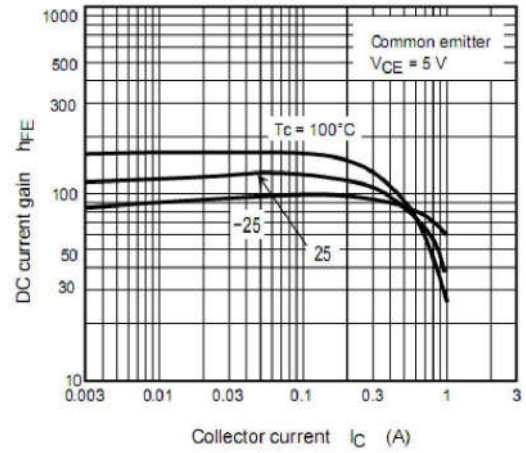


Figure 2. DC Current Gain

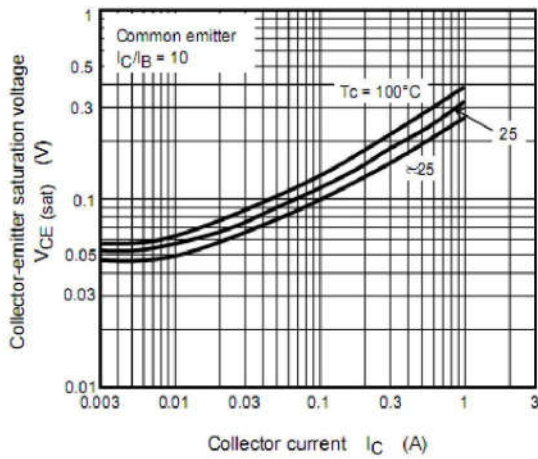


Figure 3. Collector-emitter Saturation voltage

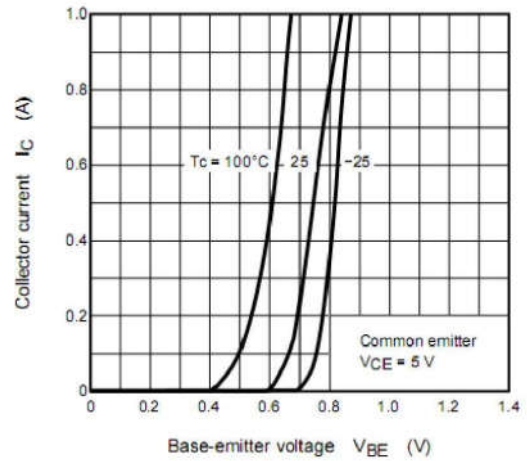


Figure 4. Collector current vs. Base-emitter voltage

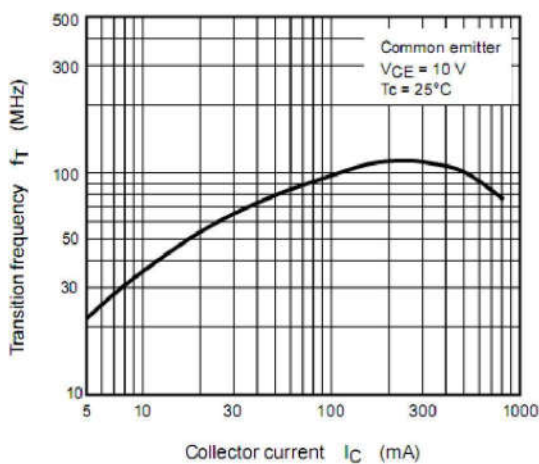


Figure 5. Gain Bandwidth Product

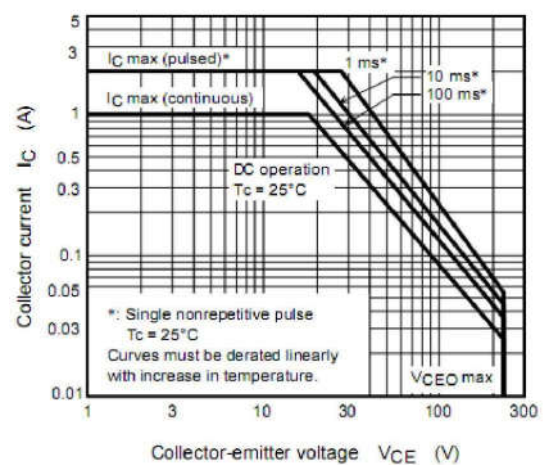
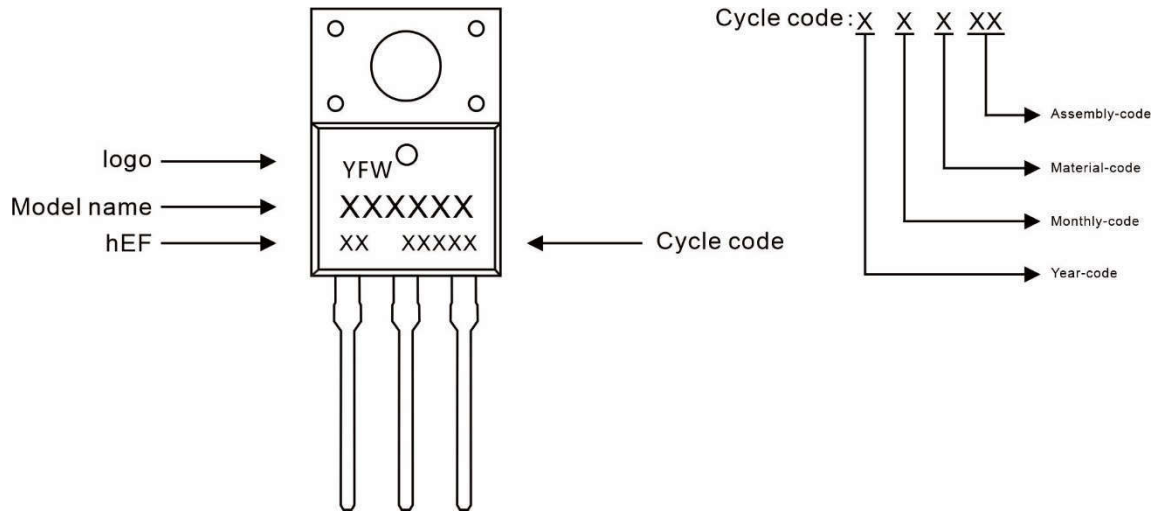


Figure 6. Safe Operating Area

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
2SC4793	TO-220F	0.06oz(1.74g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-220F

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.50	4.90	0.177	0.193
A1	2.34	2.74	0.092	0.108
A2	2.66	2.86	0.105	0.113
b	0.75	0.85	0.030	0.033
b1	1.24	1.44	0.049	0.057
c	0.40	0.60	0.016	0.024
D	10.00	10.32	0.394	0.406
E	15.75	16.05	0.620	0.632
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	3.10	3.5	0.122	0.138
L	13.50	13.90	0.531	0.547
L1	2.90	3.30	0.114	0.130
Φ	3.10	3.30	0.122	0.130

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