

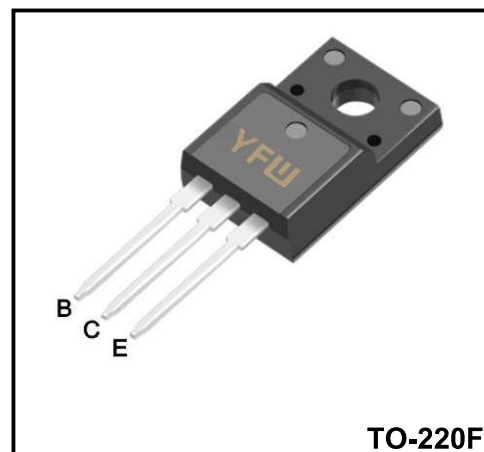
NPN Plastic-Encapsulate Transistors

APPLICATIONS

◆General purpose amplifier

FEATURES

- ◆High collector emitter voltage
- ◆large collector current
- ◆Good linearity of h_{FE}
- ◆Complementary to KTB1368



TO-220F

Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Value	Unit
Collector-base voltage		BV_{CBO}	80	V
Collector-emitter voltage		BV_{CEO}	80	V
Emitter-base voltage		BV_{EBO}	5	V
Collector current		I_C	4	A
Base current		I_B	0.4	A
Collector dissipation	Ta =25 °C	P_C	2	W
	Tc =25 °C		25	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	-55~150	°C

Electrical Characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = 10\mu A, I_E = 0$	80			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 10mA, I_B = 0$	80			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu A, I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CE} = 80V, I_E = 0$			30	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			100	μA
DC current gain	$h_{FE}(1)$	$V_{CE} = 5V, I_C = 0.5A$	40		400	
	$h_{FE}(2)$	$V_{CE} = 5V, I_C = 3A$	15	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3A, I_B = 0.3A$		0.45	1.5	V
Base-emitter on voltage	$V_{BE(on)}$	$V_{CE} = 5V, I_C = 3A$		1.0	1.5	V
Current gain bandwidth product	f_T	$V_{CE} = 5V, I_E = 0.5A$		8.0		MHz
Output capacitance	C_{ob}	$V_{CB} = 10V, f = 1MHz$		90		pF

h_{FE} Classification

Classification	KTD2060-R	KTD2060-O	KTD2060-Y	KTD2060-G
Range	40~80	80~160	120~240	200~400

Typical Characteristics

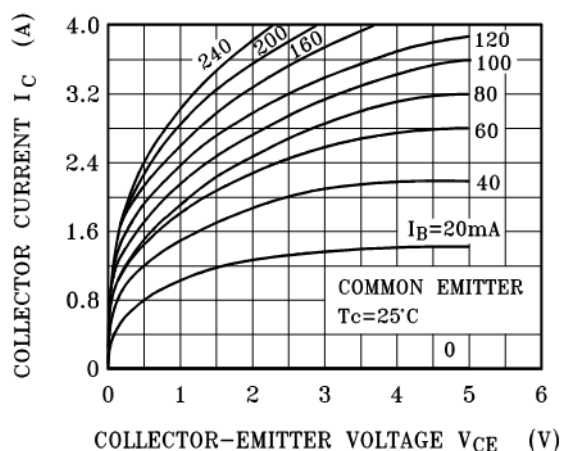


Figure.1 Static characteristics

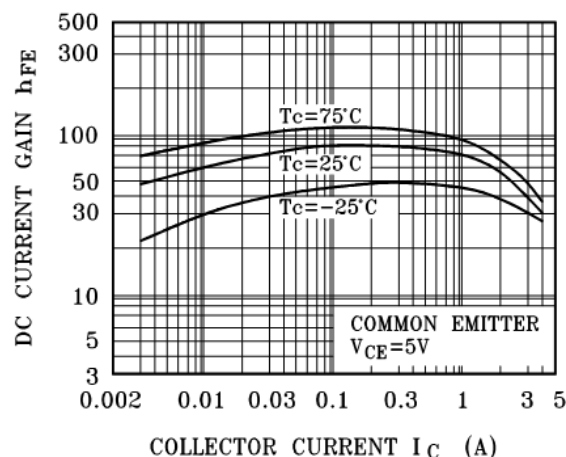


Figure.2 DC Current Gain

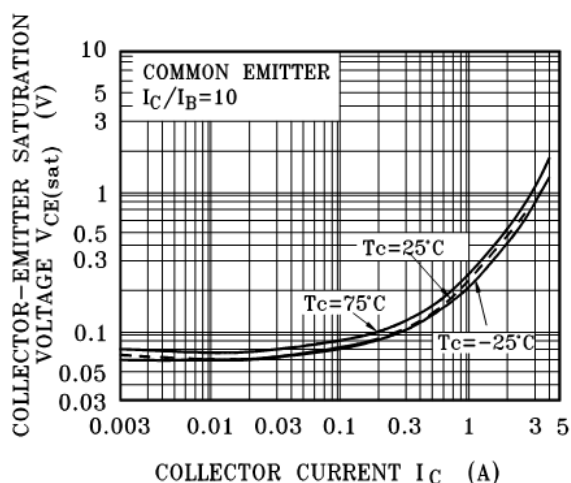


Figure.3 Collector-emitter Saturation voltage

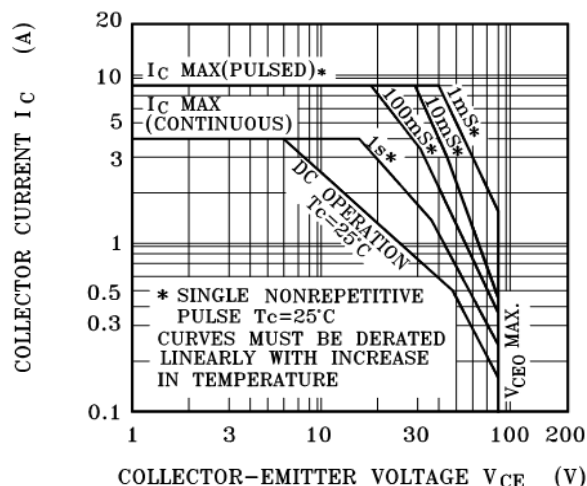


Figure.4 Safe operation area

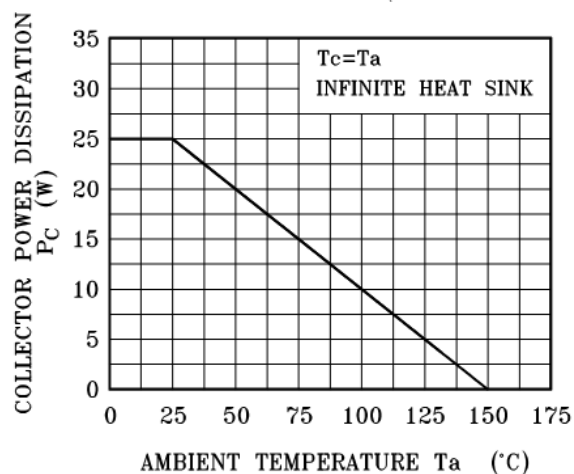
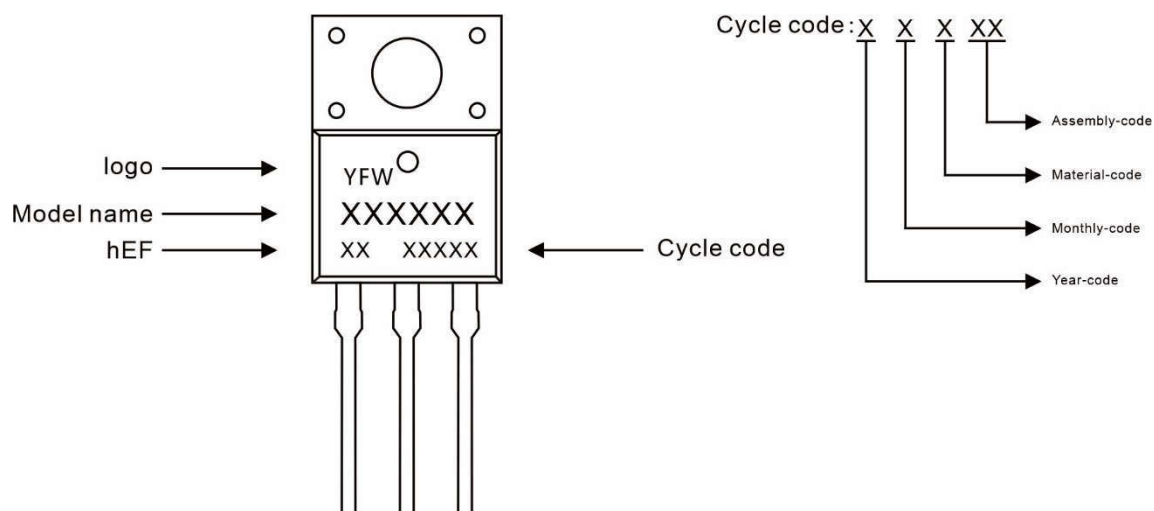


Figure.5. Power Derating

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
KTD2060	TO-220F	0.06oz(1.74g)	50pcs/tube	1000PCS/Box 5000PCS/Cartron

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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