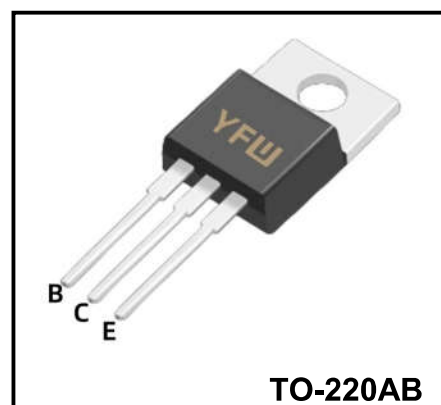


NPN Plastic-Encapsulate Transistors

Low Frequency Power Amplifier

Complement to 2SB834



TO-220AB

Absolute Maximum Rating (Ta=25°C)

Parameter		Symbol	Value	Unit
Collector-Base Voltage		BV_{CBO}	60	V
Collector-Emitter Voltage		BV_{CEO}	60	V
Emitter-Base Voltage		BV_{EBO}	7	V
Collector Current		I_C	3	A
Base Current		I_B	0.3	A
Collector Power Dissipation	Ta=25°C	P_C	2.0	W
	Tc=25°C		30	
Junction Temperature		T_j	150	°C
Storage Temperature		T_{stg}	-55~150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	$I_C = 0.5mA, I_E = 0$	60			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 10mA, I_B = 0$	60			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 0.5mA, I_C = 0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB} = 60V, I_E = 0$			100	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 7V, I_C = 0$			100	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 0.5A$	60		300	
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 3A$	20			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3A, I_B = 0.3A$			1.0	V
Base-emitter on voltage	$V_{BE(on)}$	$V_{CE} = 5V, I_C = 0.5A$			1.0	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 5V, I_C = 0.5A$	3			MHz
Collector output capacitance	C_{ob}	$V_{BE} = 10V, f = 1MHz$		35		pF

h_{FE} (1) Classification

Classification	O	Y	G
Range	60~120	100~200	150~300

Typical Characteristics

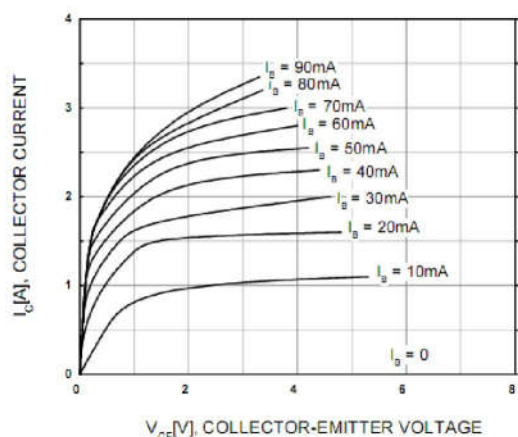


Figure 1. Static Characteristic

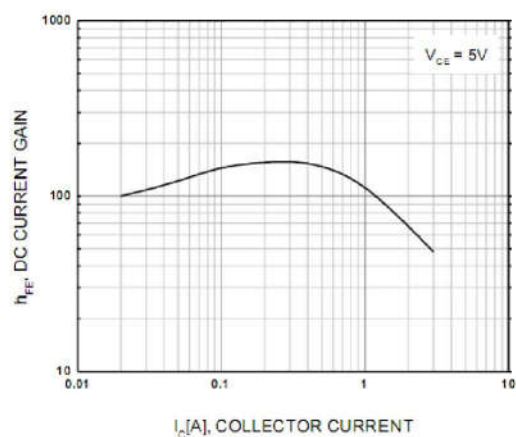


Figure 2. DC current Gain

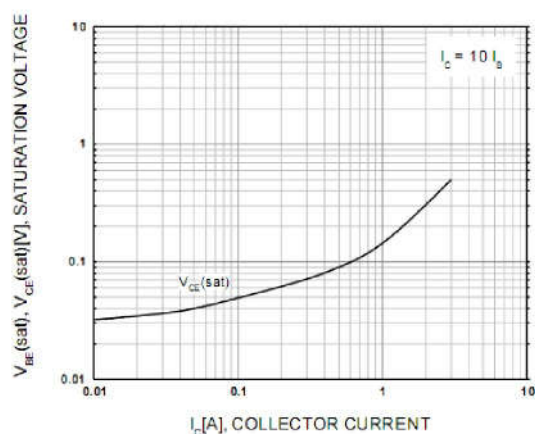


Figure 3. Collector-Emitter Saturation Voltage

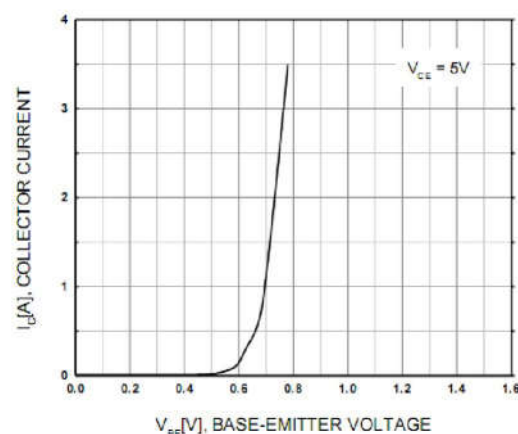


Figure 4. Base-Emitter On Voltage

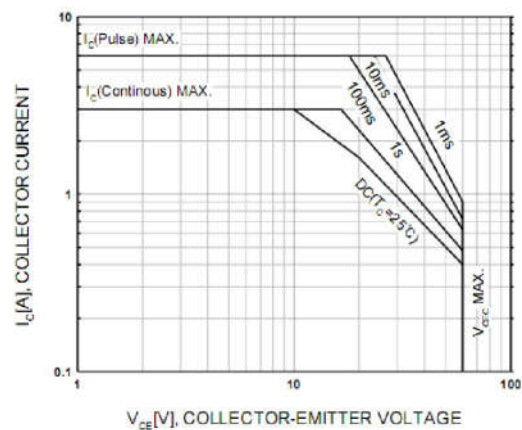


Figure 5. Safe Operating Area

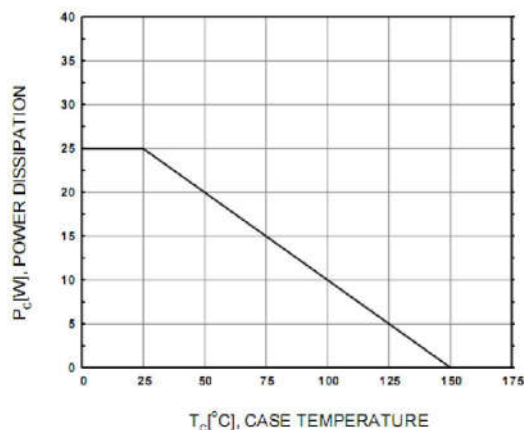
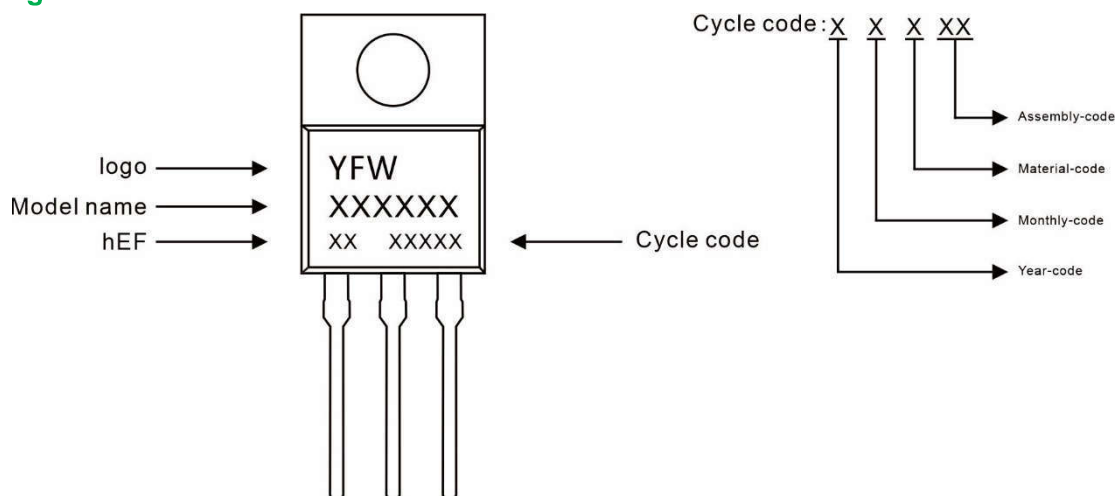


Figure 6. Power Derating

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
2SD880	TO-220AB	0.07oz(1.96g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-220AB

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.30	4.70	0.169	0.185
A1	2.52	2.82	0.099	0.111
b	0.71	0.91	0.028	0.036
b1	1.17	1.37	0.046	0.054
c	0.30	0.50	0.012	0.020
c1	1.17	1.37	0.046	0.054
D	9.90	10.20	0.390	0.402
E	8.50	8.90	0.335	0.350
E1	12.00	12.50	0.472	0.492
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	2.60	2.80	0.102	0.110
L	13.20	13.80	0.520	0.543
L1	3.80	4.20	0.150	0.165
Φ	3.60	3.96	0.142	0.156

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