/ Descriptions

TO-3P NPN Silicon NPN transistor in a TO-3P Plastic Package.

/ Features

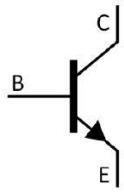
45-50W 2SB688

For 45-50W audio frequency amplifier output stage, Complementary to 2SB688.

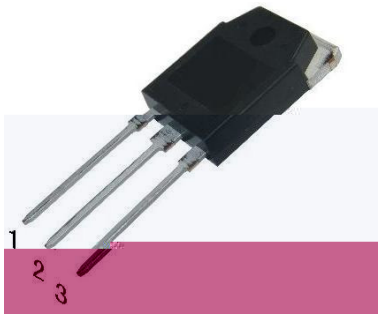
/ Applications

Designed for use in audio frequency amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	O
h_{FE} Range	55~110	80~160

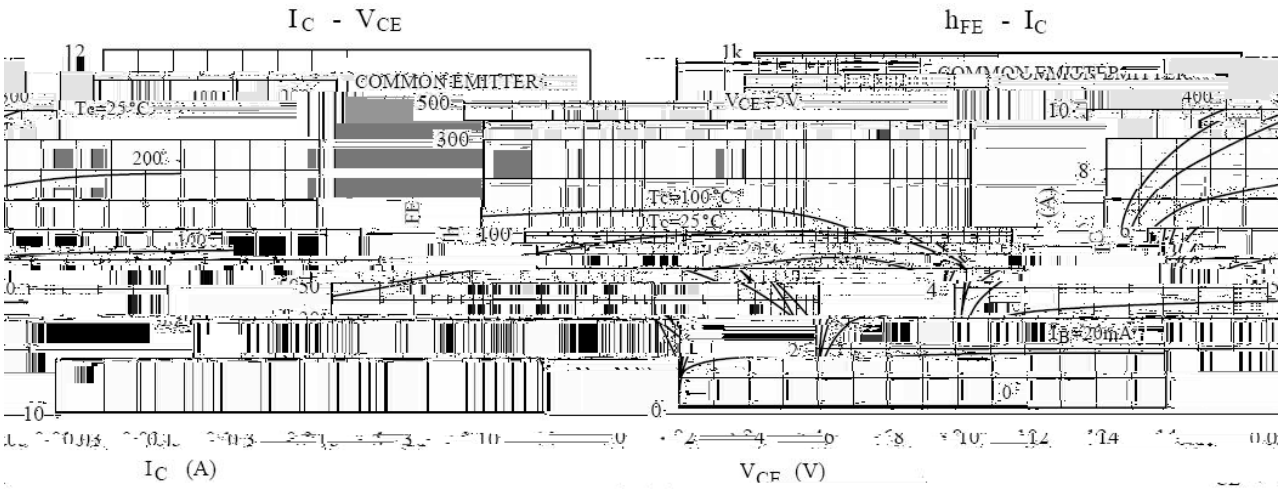
/ Absolute Maximum Ratings(Ta=25)

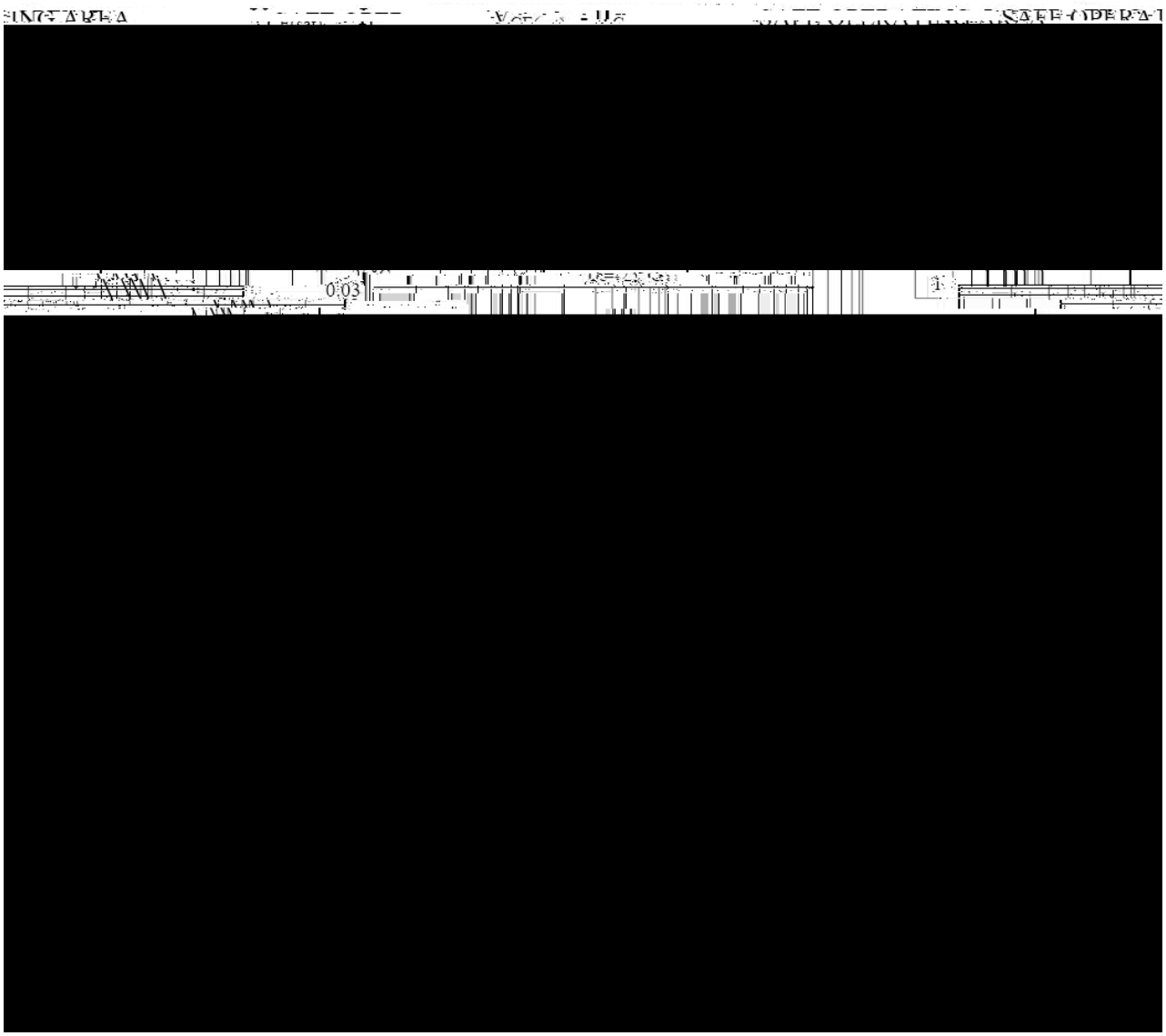
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	120	V
Collector to Emitter Voltage	V_{CEO}	120	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	10	A
Base Current	I_B	1	A
Collector Power Dissipation	P_C(TC=25)	80	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=50mA I_B=0	120			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=120V I_E=0			10	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5.0V I_C=0			10	μA
DC Current Gain	h_{FE}	V_{CE}=5.0V I_C=1.0A	55		160	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=6.0A I_B=0.6A			2	V
Base to Emitter Voltage	V_{BE}	V_{CE}=5.0V I_C=5.0A			1.5	V
Transition Frequency	f_T	V_{CE}=5.0V I_C=1.0A f=1.0MHz		12		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V I_E=0 f=1.0MHz		170		pF

/ Electrical Characteristic Curve





/ Package Dimensions