

/ Descriptions

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

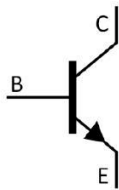
/ Features

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

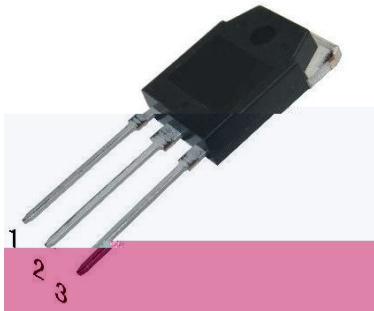
/ Applications

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

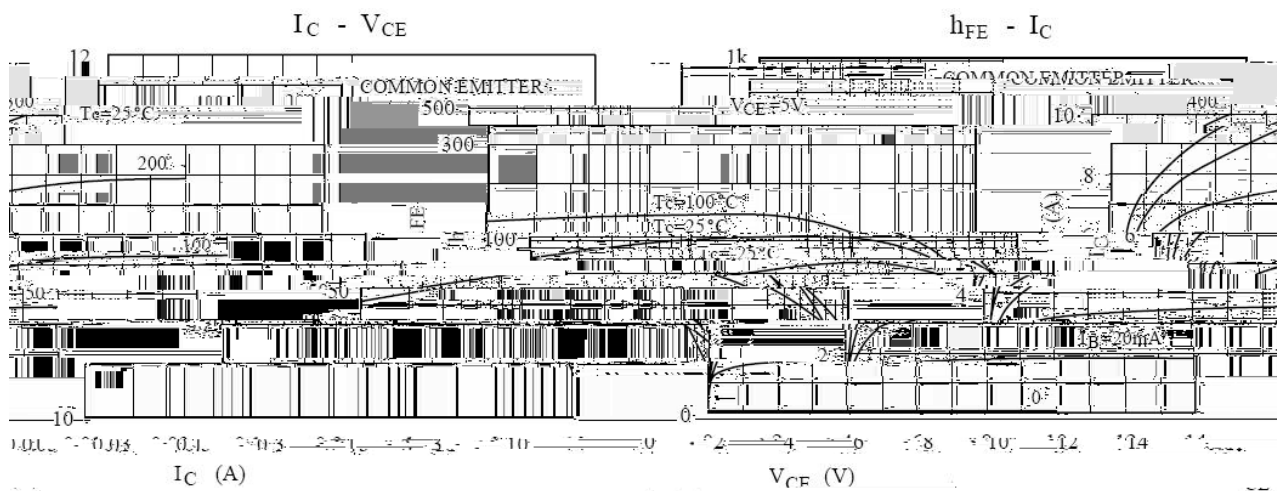
/ Absolute Maximum Ratings(Ta=25)

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	

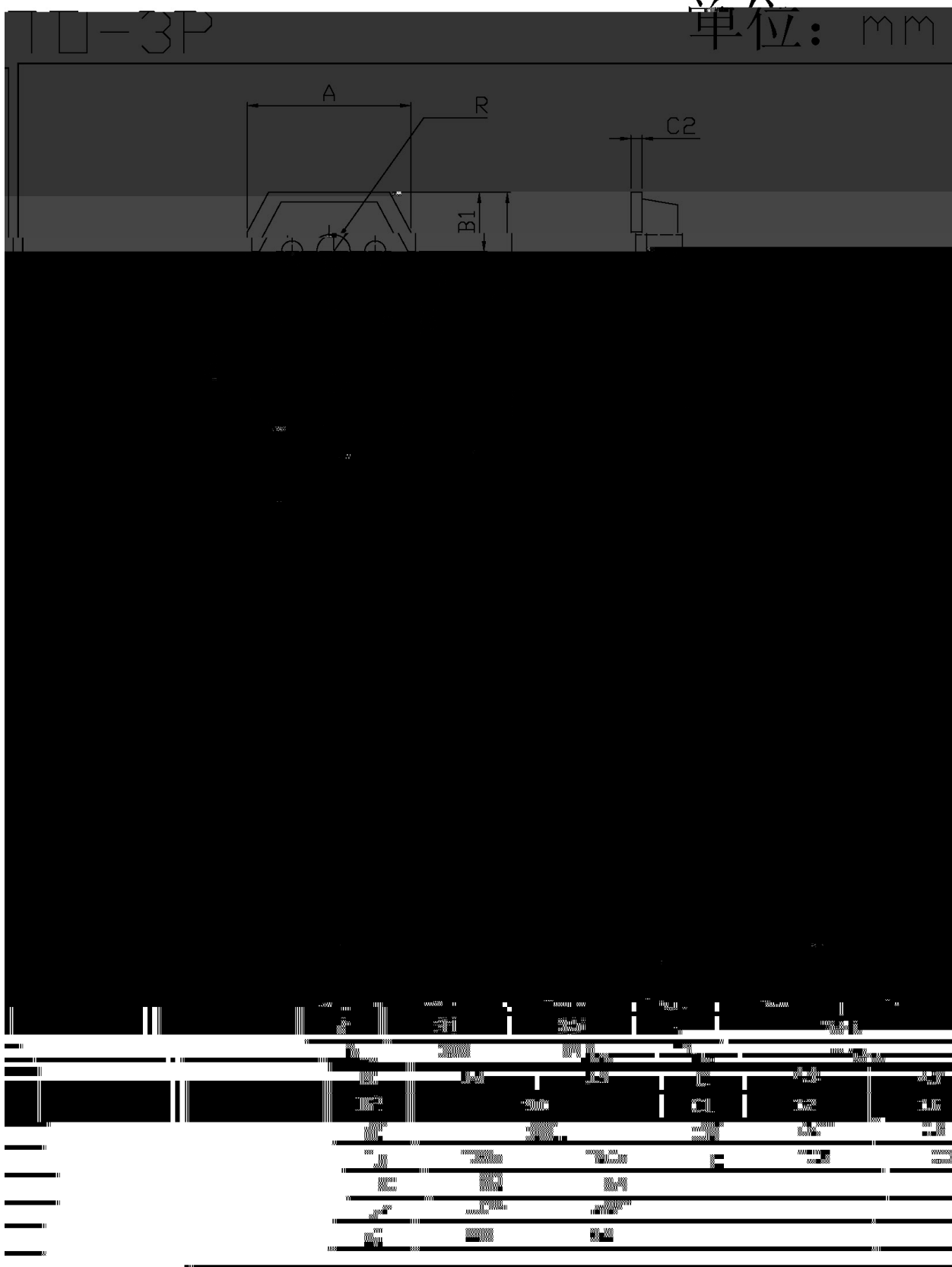
/ Electrical Characteristics(Ta=25)

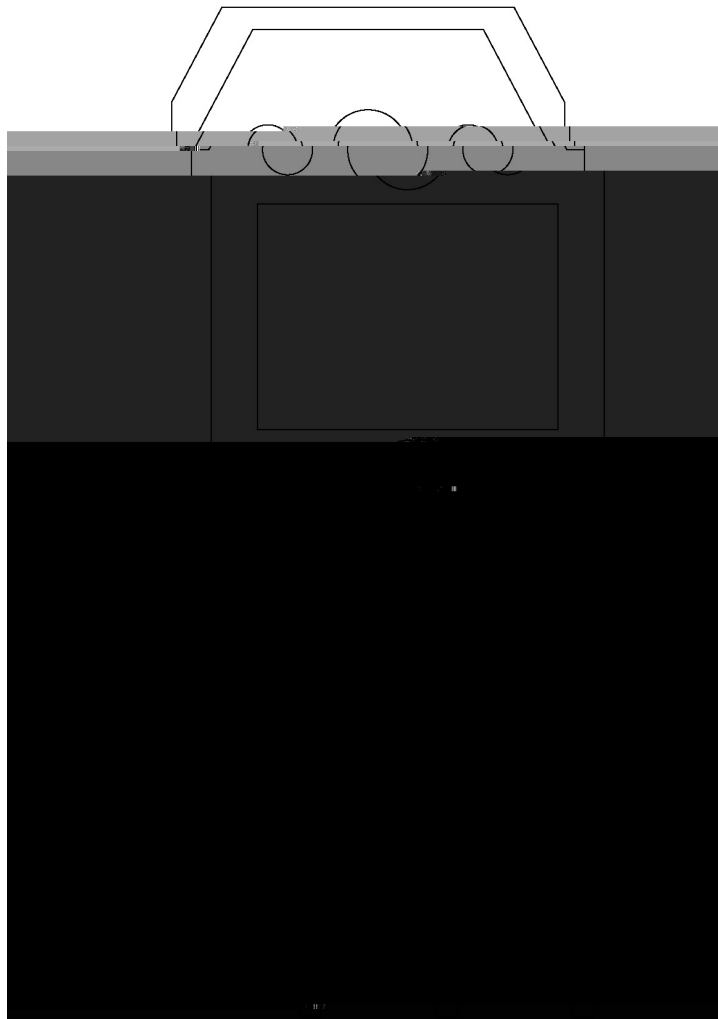
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=50mA$ $I_B=0$	120			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=120V$ $I_E=0$			10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			10	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=1.0A$	55		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





2SD718
Rev.E Mar.-2016