

/ Descriptions

WR0553I QSQ Silicon NPN transistor in a TO-220F Plastic Package.

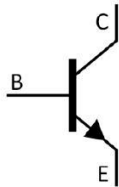
/ Features

/ /S_F@63 Z/
Low V_{CE(sat)}, excellent DC current gain characteristics, P_C=30W, wide SOA.

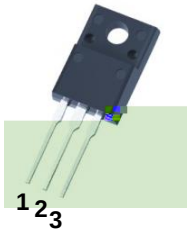
/ Applications

General Purpose Power Amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

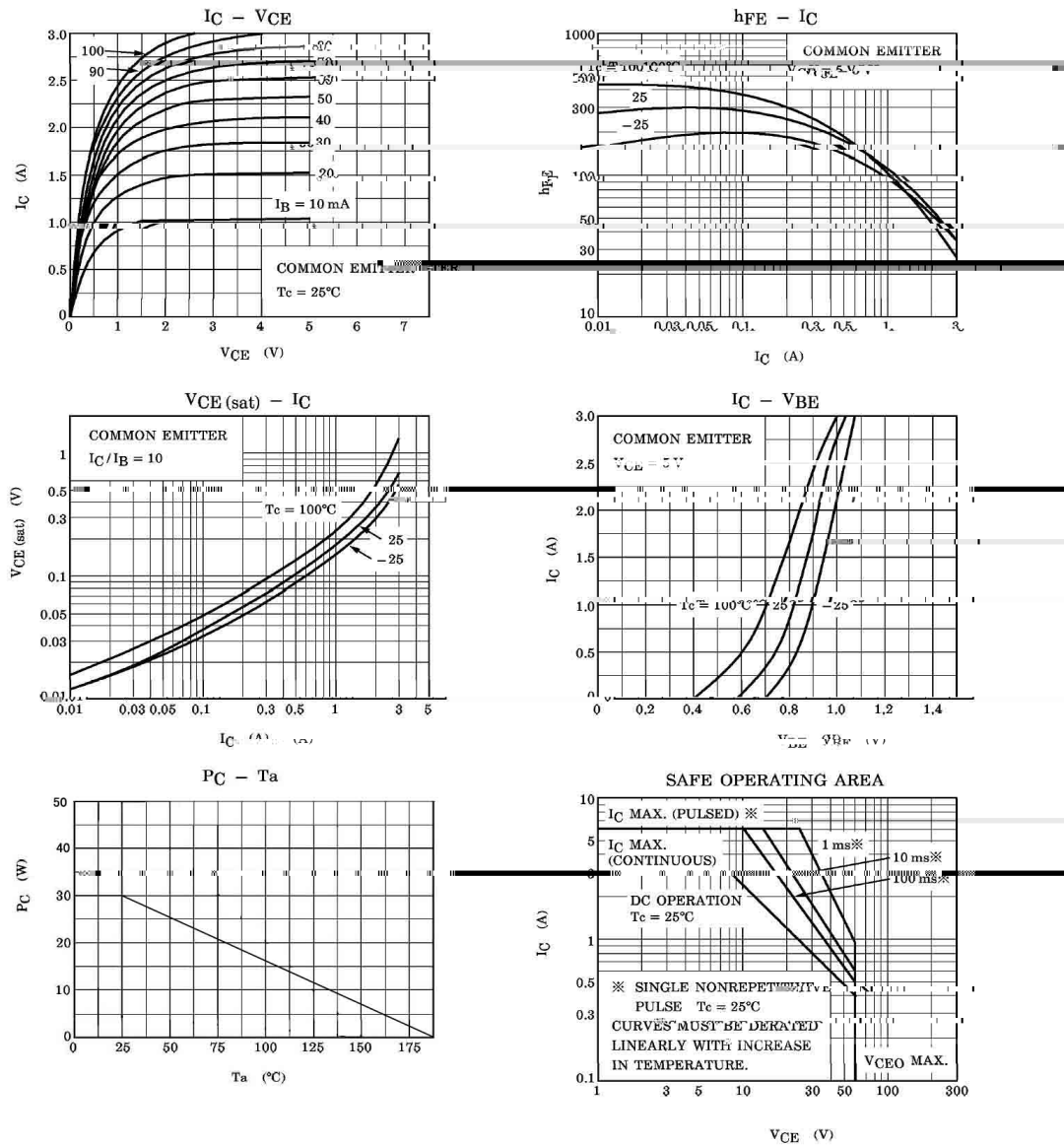
/ h_{FE} Classifications & Marking

h _{FE} Classifications Symbol	E	F
h _{FE} Range	100 200	160 320

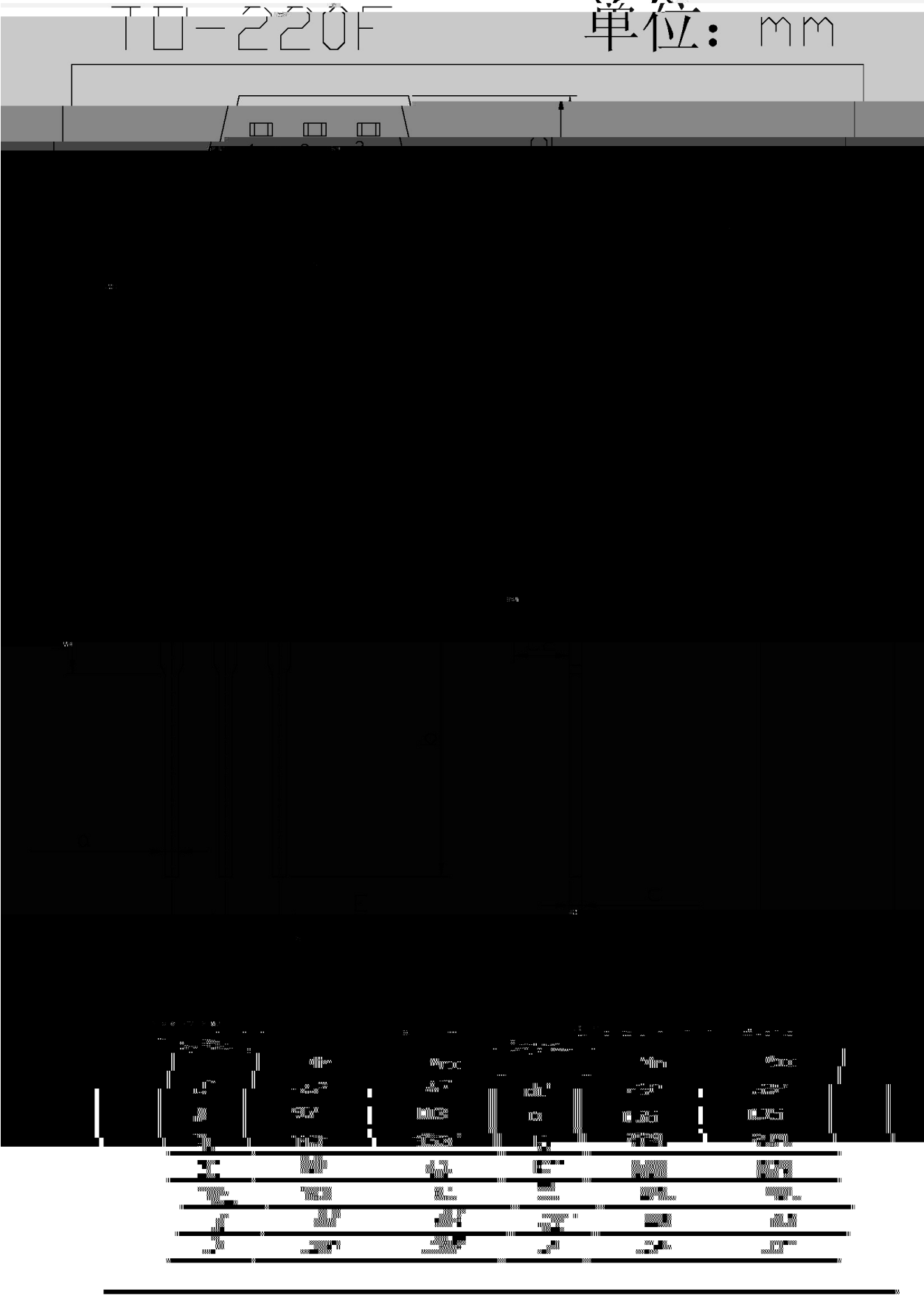
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	3.0	A
Peak Collector Current	I_{CM}	6.0	A
Collector Power Dissipation	P_C	2.0	W
Collector Power Dissipation	$P_C(T_c=25^\circ C)$	30	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=50\text{ }\mu\text{A}$	80			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0\text{mA}$	60			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=50\text{ }\mu\text{A}$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60\text{V}$ $I_E=0$			10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4.0\text{V}$ $I_C=0$			10	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0\text{V}$ $I_C=500\text{mA}$	100		320	

/ Electrical Characteristic Curve



/ Package Dimensions



2SD2061

Rev.E Mar.-2016

DATA SHEET

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-----|-------------------|----|------------------------|---|
| 1 | 25 | 150 $\frac{3}{8}$ | 60 | 90sec; | 1.Preheating:25~150 $\frac{3}{8}$, Time:60~90sec. |
| 2 | 255 | ± 5 $\frac{3}{8}$ | 5 | ± 0.5sec; | 2.Peak Temp.:255 ± 5 $\frac{3}{8}$, Duration:5 ± 0.5sec. |
| 3 | | | 2 | 10 $\frac{3}{8}$ /sec. | 3. Cooling Speed: 2~10 $\frac{3}{8}$ /sec. |

/ Resistance to Soldering Heat Test Conditions

270 ± 5 $\frac{3}{8}$ 10 ± 1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units					Dimension (unit mm ³)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195