

/ Descriptions

TO-220F PNP Silicon PNP transistor in a TO-220F Plastic Package.

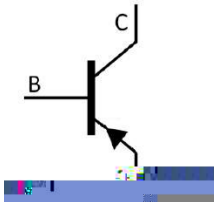
/ Features

Low $V_{CE(sat)}$, excellent DC current gain characteristics, wide SOA, fast speed switching, complements the 2SC4596.

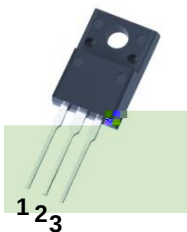
/ Applications

High speed switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

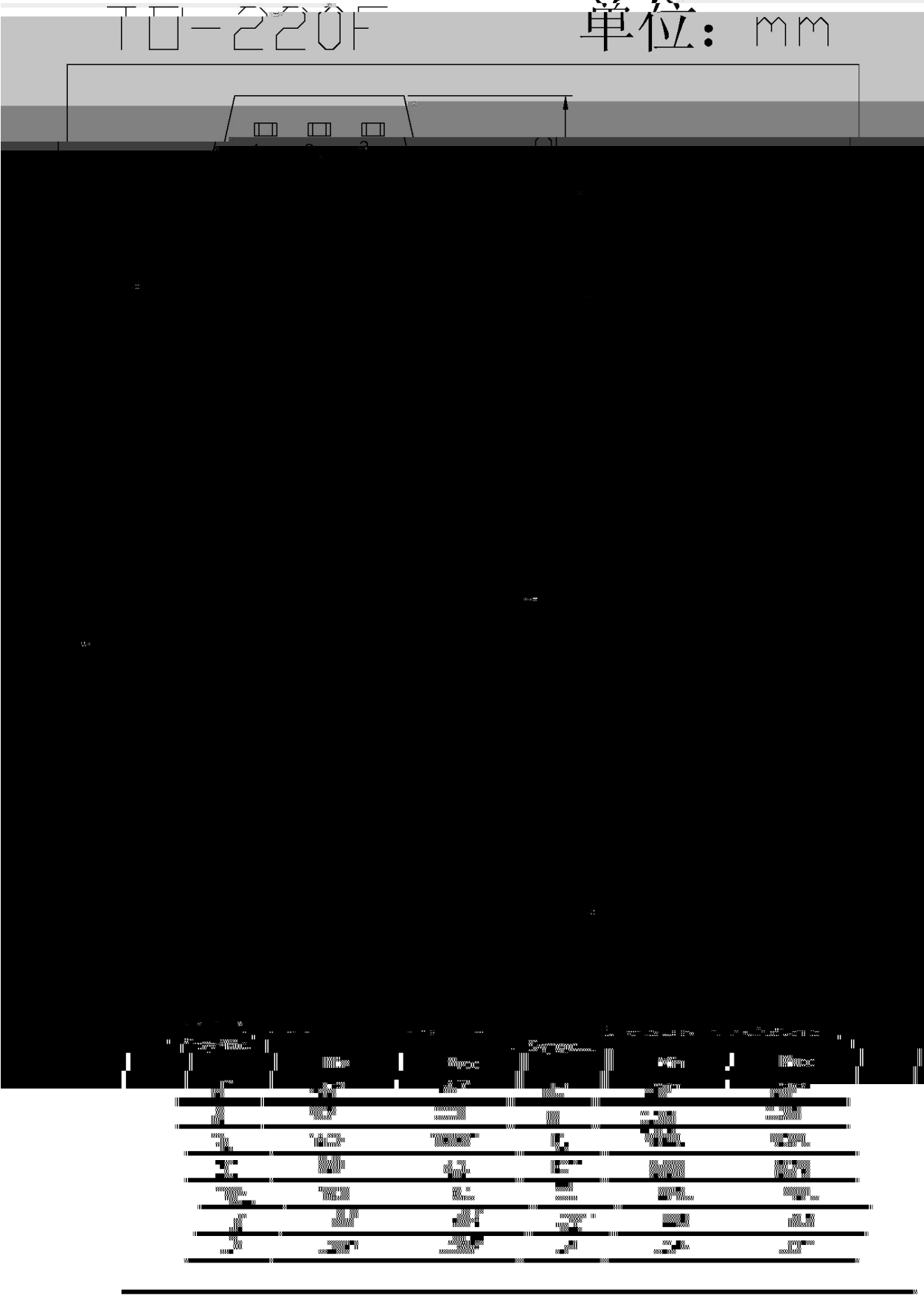
h_{FE} Classifications Symbol	D	E	F
h_{FE} Range	60 120	100 200	160 320

/ Absolute Maximum Ratings(Ta=25)

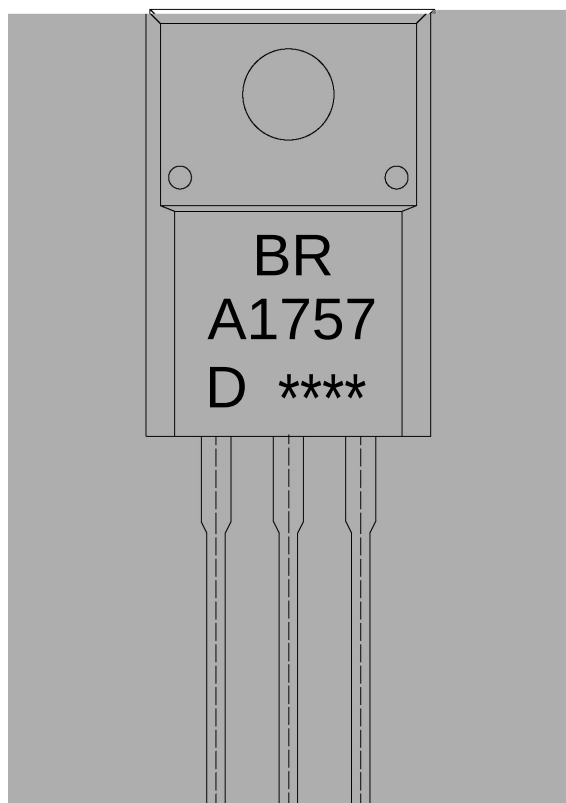
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-5.0	A
Collector Current – Continuous(Pulse)	I_{CP}	-10	A
Collector Power Dissipation	P_C	2.0	W
Collector Power Dissipation	$P_C(T_C=25)$	25	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}	$I_C=-50\text{ A}$ $I_E=0$	-100			V
Collector to Base Breakdown Voltage	V_{CEO}	$I_C=-1.0\text{mA}$ $I_B=0$	-60			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-50\text{ A}$ $I_C=0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-100\text{V}$ $I_E=0$			-10	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5.0\text{V}$ $I_C=0$			-10	A
DC Current Gain	h_{FE}	$V_{CE}=-2.0\text{V}$ $I_C=-1.0\text{A}$	60		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=-3.0\text{A}$ $I_B=-0.15\text{A}$			-0.3	V
	$V_{CE(sat)(2)}$	$I_C=-4.0\text{A}$ $I_B=-0.2\text{A}$			-0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)(1)}$	$I_C=-3.0\text{A}$ $I_B=-0.15\text{A}$			-1.2	V
	$V_{BE(sat)(2)}$	$I_C=-4.0\text{A}$ $I_B=-0.2\text{A}$			-1.5	V
Transition Frequency	f_T	$V_{CE}=-10\text{V}$ $I_E=0.5\text{A}$ $f=30\text{MHz}$		80		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}$ $I_E=0\text{A}$ $f=1.0\text{MHz}$		130		pF
Turn-On Time	t_{on}	$V_{CC}=-30\text{V}$ $I_C=-3\text{A}$ $R_L=10$ $I_{B1}=-I_{B2}=-0.15\text{A}$			0.3	s
Fall Time	t_f				0.3	s
Storage Time	t_{stg}				1.5	s

/ Package Dimensions



/ Marking Instructions



BR

A1757

D: h_{FE}

Note:

BR: Company Code.

A1757: Product Type.

D: h_{FE} Classifications Symbol

****: Lot No. Code, code change with Lot No.

2SA1757

Rev.E Mar.-2016

DATA SHEET