SPTECH Silicon PNP Power Transistor

DESCRIPTION

- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= -0.4V(Max)@I_C= -6A
- Good Linearity of h_{FE}
- High Switching Speed
- Complement to Type 2SC3710

APPLICATIONS

- Designed for high current switching applications

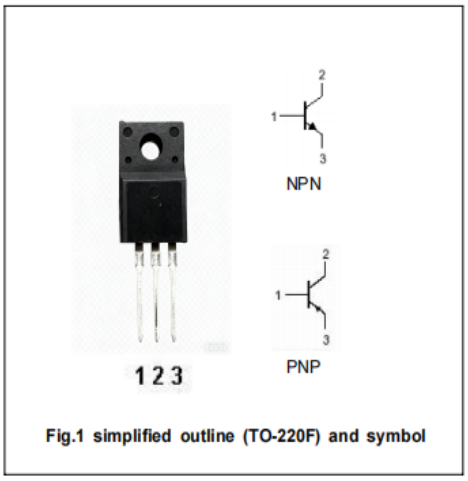
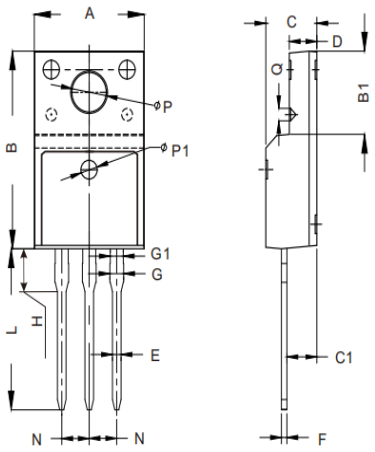


Fig.1 simplified outline (TO-220F) and symbol

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-80	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current-Continuous	-12	A
I_B	Base Current-Continuous	-2	A
P_C	Collector Power Dissipation @ T_C=25℃	30	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



Symbol	Millimeters		Symbol	Millimeters	
	Min.	Max.		Min.	Max.
A	9.60	10.4	G	1.12	1.42
B	15.4	16.2	G1	1.10	1.40
B1	6.30	6.90	H	3.40	3.80
C	4.30	4.90	L	12.0	14.8
C1	2.20	3.00	N	2.34	2.74
D	2.40	2.90	ØP	3.00	3.30
E	0.60	1.00	ØP1	1.35	1.75
F	0.30	0.60	Q	0.80	1.20

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= -50mA ; I_B= 0	-80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -6A; I_B= -0.3A			-0.4	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -6A; I_B= -0.3A			-1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -80V ; I_E= 0			-10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -6V ; I_C= 0			-10	μA
h_{FE-1}	DC Current Gain	I_C= -1A ; V_{CE}= -1V	70		240	
h_{FE-2}	DC Current Gain	I_C= -6A ; V_{CE}= -1V	40			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= -10V;f_{test}= 1MHz		400		pF
f_T	Current-Gain—Bandwidth Product	I_C= -1A; V_{CE}= -5V		50		MHz
Switching Times						
t_{on}	Turn-on Time	I_C= -6A ,I_{B1}= -I_{B2}= -0.3A, V_{CC}= -30V, R_L= 5Ω		0.3		μs
t_{stg}	Storage Time			1.0		μs
t_f	Fall Time			0.5		μs

◆ h_{FE-1} Classifications

O	Y
70-140	120-240