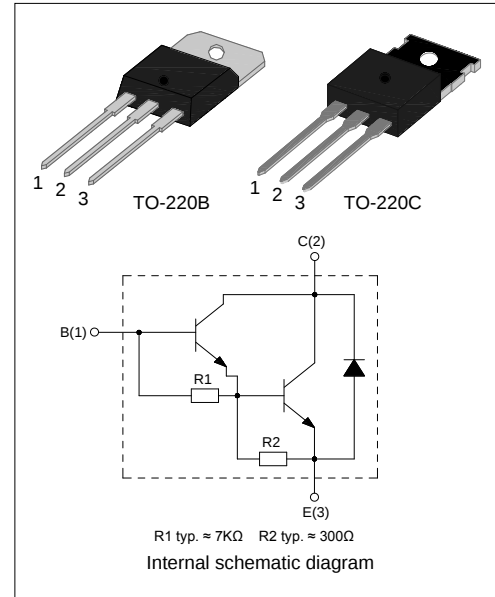


DESCRIPTION:

The TIP122 is a silicon NPN power transistor in monolithic darlington configuration, mounted in TO-220B and TO-220C plastic package. It is intended for use in power linear and switching applications.

MAIN FEATURES

Symbol	Value	Unit
I_C	5	A
V_{CEO}	100	V



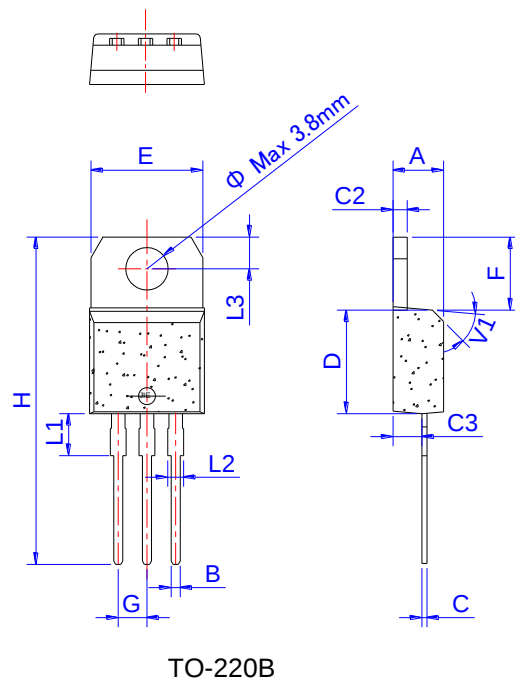
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage temperature range	T_{stg}	-55 to 150	$^{\circ}C$
Max. operating junction temperature	T_j	150	$^{\circ}C$
Collector-emitter voltage ($I_B=0$)	V_{CEO}	100	V
Collector-base voltage ($I_E=0$)	V_{CBO}	100	V
Emitter-base voltage ($I_C=0$)	V_{EBO}	5	V
Collector current	I_C	5	A
Collector peak current	I_{CM}	8	A
Base current	I_B	120	mA
Collector power dissipation	P_C	2	W
Collector power dissipation at $T_{case} = 25^{\circ}C$	P_C	65	W

ELECTRICAL CHARACTERISTICS ($T_{case}=25^{\circ}C$ unless otherwise specified)

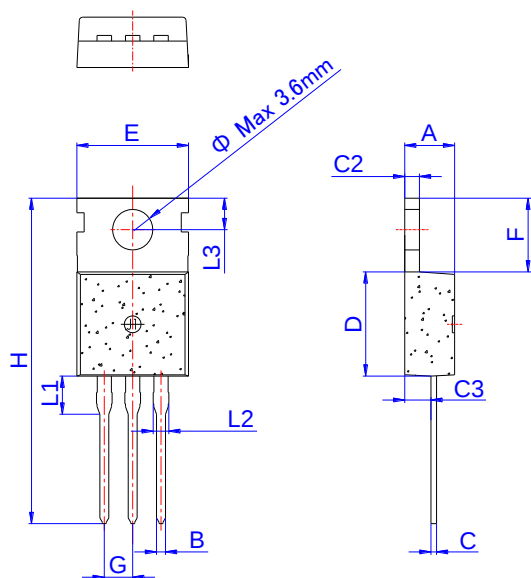
Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{CEO}	$I_B=0$ $V_{CE}=50V$	-	-	0.5	mA
I_{CBO}	$I_E=0$ $V_{CB}=100V$	-	-	0.2	mA
I_{EBO}	$I_C=0$ $V_{EB}=5V$	-	-	2	mA
V_{CEO}	$I_B=0$ $I_C=100mA$	100	-	-	V
$V_{CE(sat)(1)}$	$I_C=3A$ $I_B=12mA$	-	-	2	V
$V_{CE(sat)(2)}$	$I_C=5A$ $I_B=20mA$	-	-	4	V
V_{BE}	$I_C=3A$ $V_{CE}=3V$	-	-	2.5	V
$h_{FE(1)}$	$I_C=0.5A$ $V_{CE}=3V$	1000	-	-	
$h_{FE(2)}$	$I_C=3A$ $V_{CE}=3V$	1000	-	-	
C_{ob}	$I_E=0$ $V_{CB}=10V$ $f=1.0MHz$	-	-	200	pF

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.60		10.4	0.378		0.409
F	6.20		6.60	0.244		0.260
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

PACKAGE MECHANICAL DATA



TO-220C

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.39			0.133	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
Φ		3.6			0.142	

FIG.1: Power derating curve

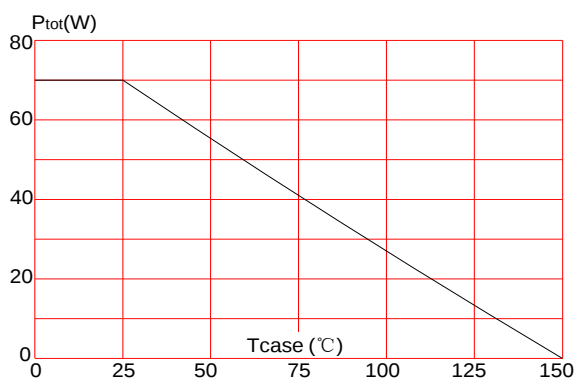


FIG.2: Safe operating areas

