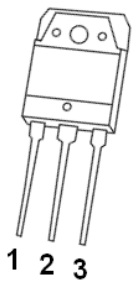
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-3P Plastic-Encapsulate Transistors

2SC5198 TRANSISTOR (NPN)

TO – 3P

1. BASE
2. COLLECTOR
3. EMITTER



FEATURES

- Low Collector Saturation Voltage
- Good Linearity of h_{FE}

APPLICATIONS

- Power Amplifier Applications
- Recommend for 70W High Fidelity Audio Frequency Amplifier Output Stage Applications

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	140	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	10	A
P_C	Collector Power Dissipation T_C=25℃	100	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	36	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

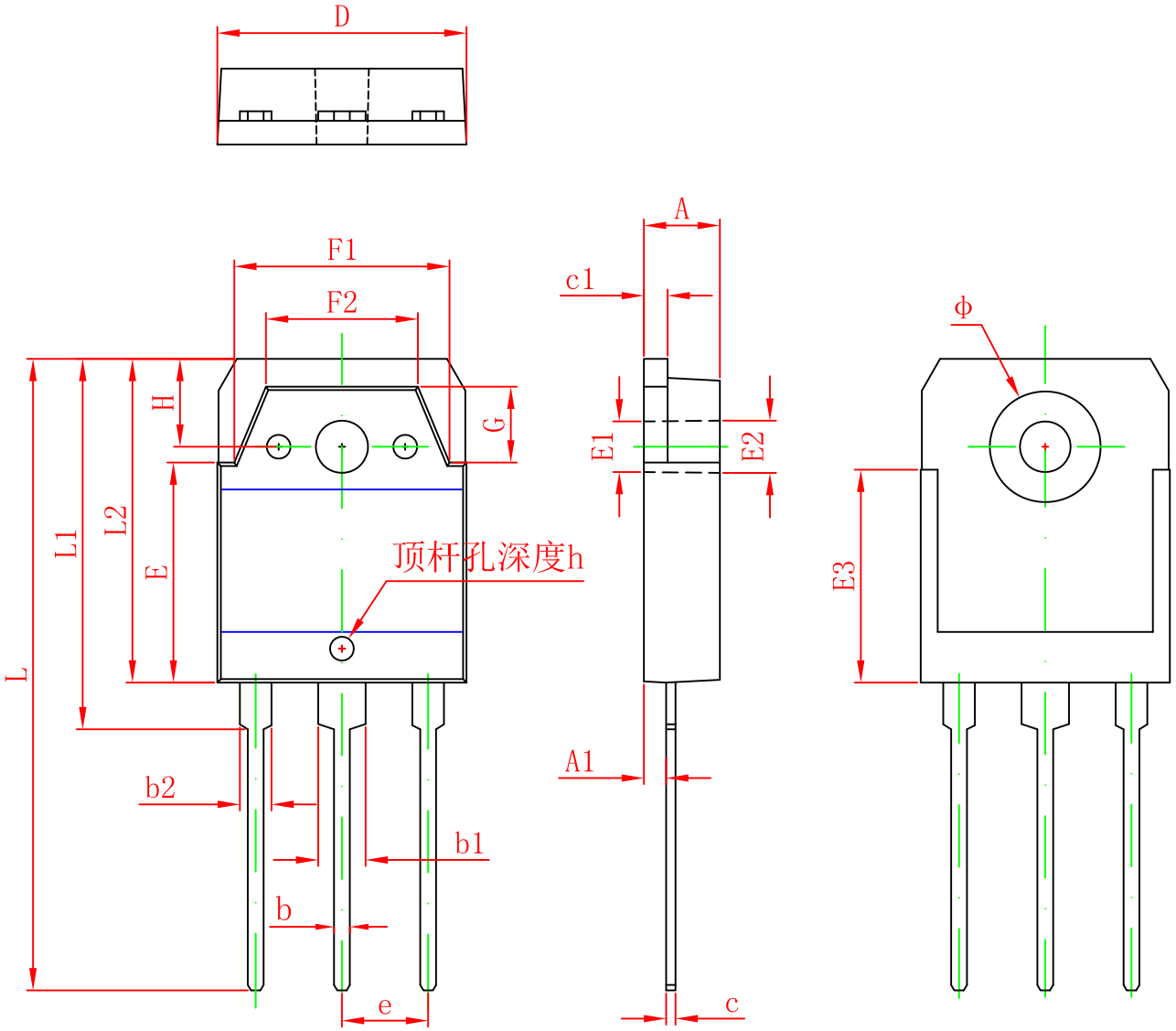
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA,I_E=0	140			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=50mA,I_B=0	140			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=1mA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=140V,I_E=0			5	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			5	μA
DC current gain	$h_{FE(1)}$	V_{CE}=5V, I_C=1A	55		160	
	$h_{FE(2)}$	V_{CE}=5V, I_C=5A	35			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=7A,I_B=0.7A			2	V
Base-emitter voltage	V_{BE}	V_{CE}=5V, I_C=5A			1.5	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0, f=1MHz		170		pF
Transition frequency	f_T	V_{CE}=5V,I_C=1A		30		MHz

CLASSIFICATION OF $h_{FE\ (1)}$

RANK	R	O
RANGE	55-110	80-160

TO-3P Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.600	5.000	0.181	0.197
A1	1.200	1.600	0.047	0.063
b	0.800	1.200	0.031	0.047
b1	2.800	3.200	0.110	0.126
b2	1.800	2.200	0.071	0.087
c	0.500	0.700	0.020	0.028
c1	1.450	1.650	0.057	0.065
D	15.450	15.850	0.608	0.624
E	13.700	14.100	0.539	0.555
E1	3.200 REF		0.126 REF	
E2	3.300 REF		0.130 REF	
E3	13.450 REF		0.530 REF	
F1	13.400	13.800	0.528	0.543
F2	9.400	9.800	0.370	0.386
L	39.900	40.300	1.571	1.587
L1	23.200	23.600	0.913	0.929
L2	20.300	20.600	0.799	0.811
Φ	6.900	7.100	0.272	0.280
G	5.150	5.550	0.203	0.219
e	5.450 TYP		0.215 TYP	
H	5.000 REF		0.197 REF	
h	0.000	0.300	0.000	0.012