

TO-220-3L Plastic-Encapsulate Transistors

2SC3149 TRANSISTOR (NPN)

FEATURES

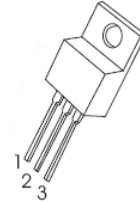
- High breakdown voltage ($V_{CBO} > 900V$)
- Fast switching speed
- Wide ASO

MAXIMUM RATINGS ($T_a = 25^\circ C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	900	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current –Continuous	0.5	A
P_C	Collector Power Dissipation	2	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55-150	$^\circ C$

TO-220-3L

1. BASE
2. COLLECTOR
3. EMITTER



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}^*$	$I_C = 1mA, I_E = 0$	900			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C = 5mA, I_B = 0$	800			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1mA, I_C = 0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB} = 800V, I_E = 0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			10	μA
DC current gain	h_{FE1}^*	$V_{CE} = 5V, I_C = 100mA$	10		40	
	h_{FE2}^*	$V_{CE} = 5V, I_C = 200mA$	8			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C = 200mA, I_B = 40mA$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C = 200mA, I_B = 40mA$			1.5	V
Transition frequency	f_T	$V_{CE} = 10V, I_C = -100mA$		15		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		30		pF
Turn-on time	t_{on}	$I_C = 1A, I_{B1} = 0.2A, I_{B2} = -0.4A, R_L = 400\Omega, V_{CC} = 400V$			1.0	μS
Storage time	t_{stg}				3.0	μS
Fall time	t_f				0.7	μS

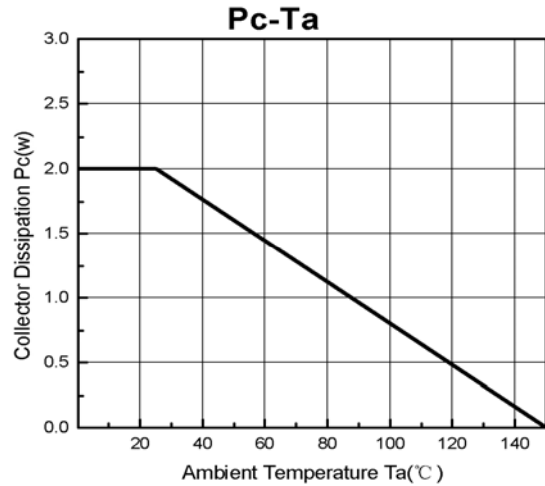
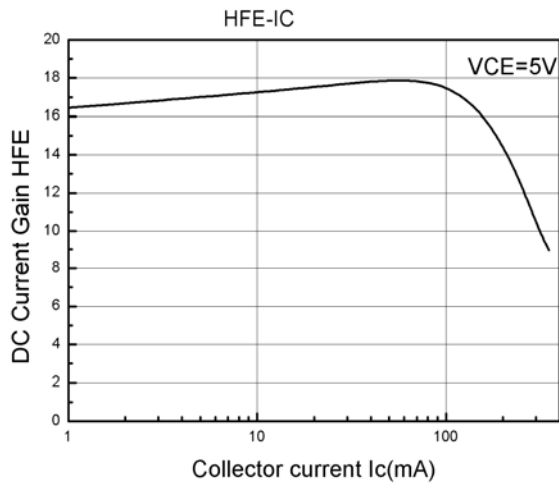
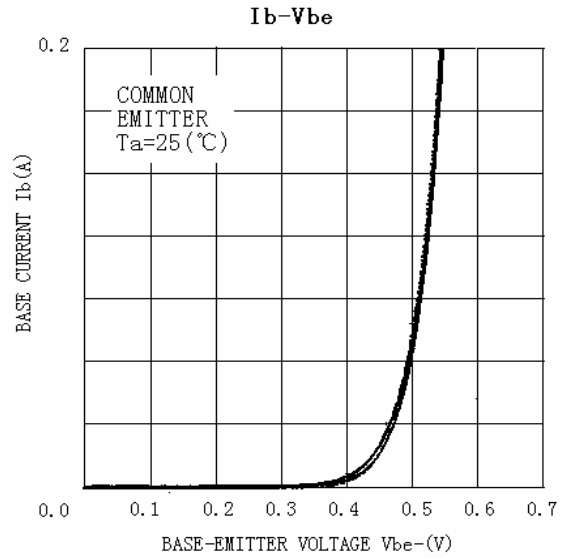
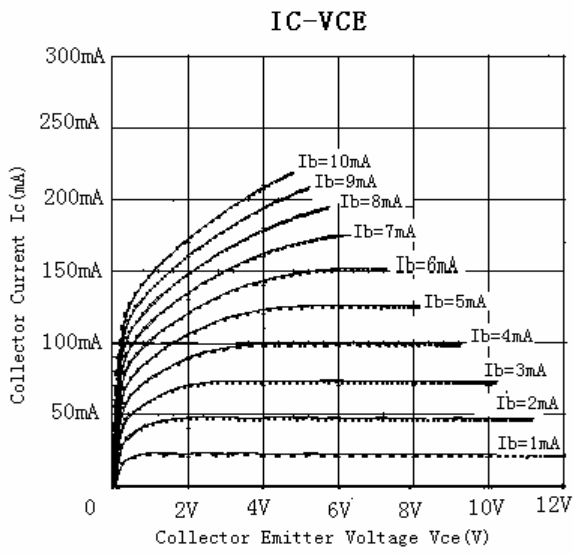
* pulse test.

CLASSIFICATION OF h_{FE1}

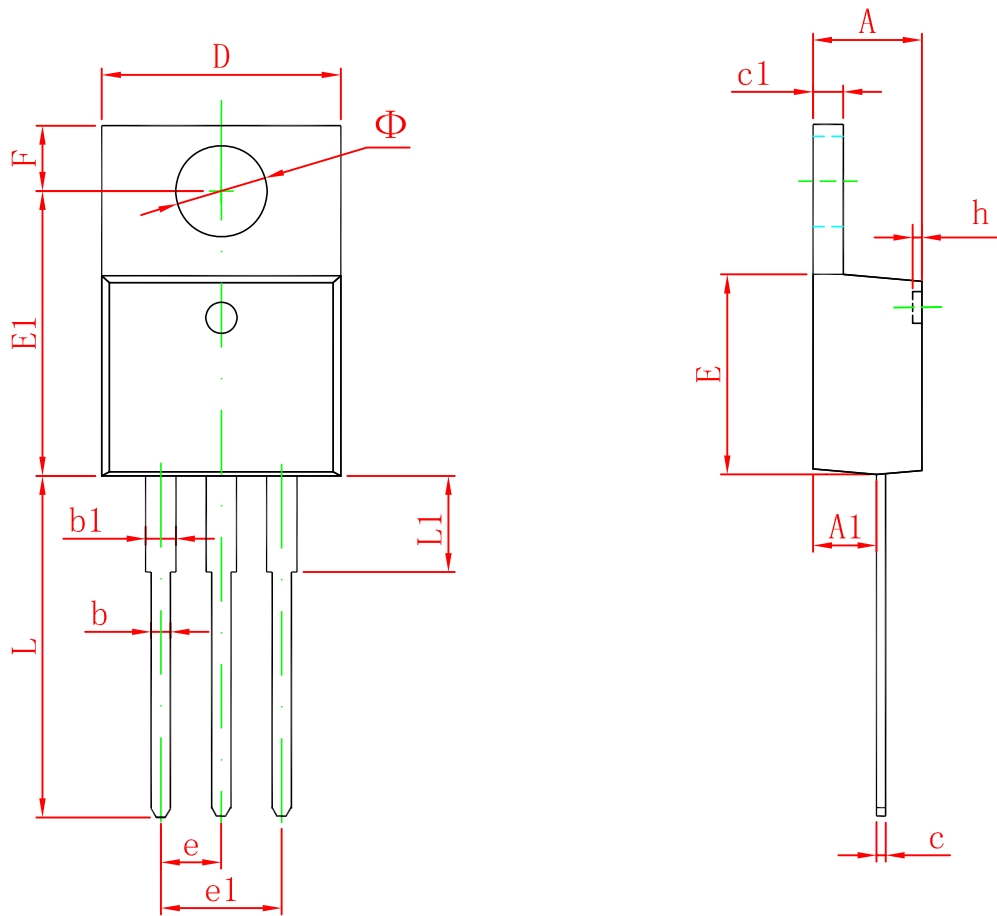
Rank	K	L	M
Range	10-20	15-30	20-40

Typical Characteristics

2SC3149



TO-220-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
Φ	3.735	3.935	0.147	0.155