JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-220 Plastic-Encapsulate Transistors

3DD13007 TRANSISTOR（NPN）

FEATURES

Power dissipation

P_{CM} : 2 W (Tamb=25℃)

Collector current

I_{CM}: 8 A

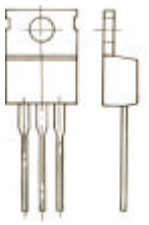
Collector-base voltage

$V_{(BR)CBO}$: 700 V

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to +150℃

TO—220



1.BASE

2.COLLECTOR

3.EMITTER 1 2 3

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	Ic= 1mA, I_E=0	700			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	Ic= 10mA, I_B=0	400			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	I_E= 1mA, I_C=0	9			V
Collector cut-off current	I_{CBO}	V_{CB}= 700V, I_E=0			1	mA
Emitter cut-off current	I_{EBO}	V_{EB}= 9 V, I_C=0			100	μA
DC current gain	$h_{FE\ (1)}$	V_{CE}= 5V, I_C= 2 A	8		40	
	$h_{FE\ (2)}$	V_{CE}=5 V, I_C=5A	5		30	
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=2A,I_B=0.4A			1	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C=2A, I_B= 0.4A			1.2	V
Transition frequency	f_T	Ic=500mA,V_{CE}=10V f=1MH_Z	4			MH_Z
Collector output capacitance	C_{ob}	V_{CE}=10,I_E=0, f=0.1MHz		80		pF
Fall time	t_f	Vcc=125V, Ic=5A			0.7	μs
Storage time	t_s	I_{B1}=-I_{B2}=1A			3	μs

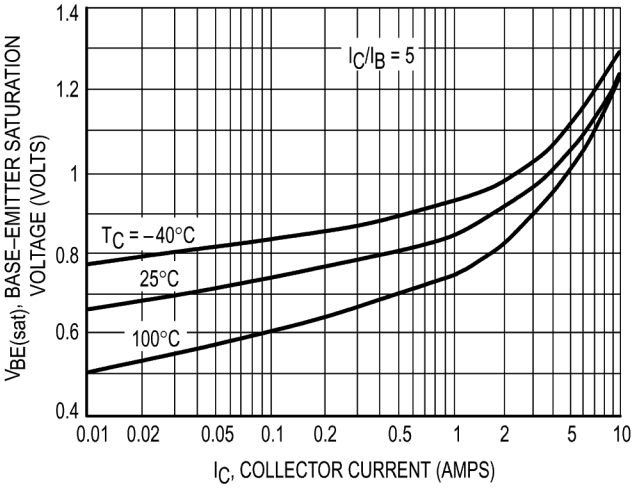
CLASSIFICATION OF $h_{FE(1)}$

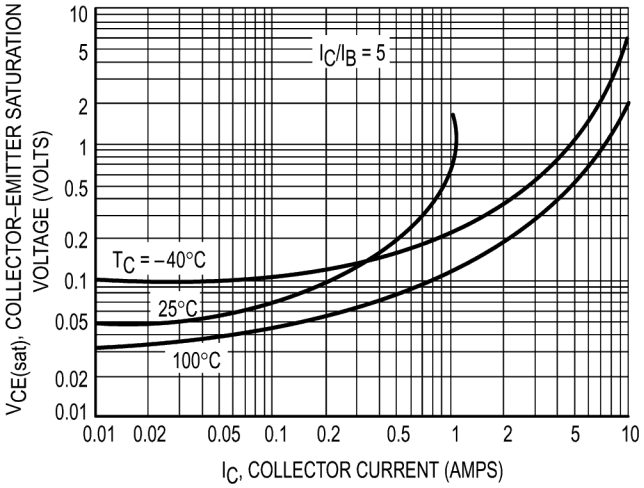
Rank						
Range	8-15	15-20	20-25	25-30	30-35	35-40

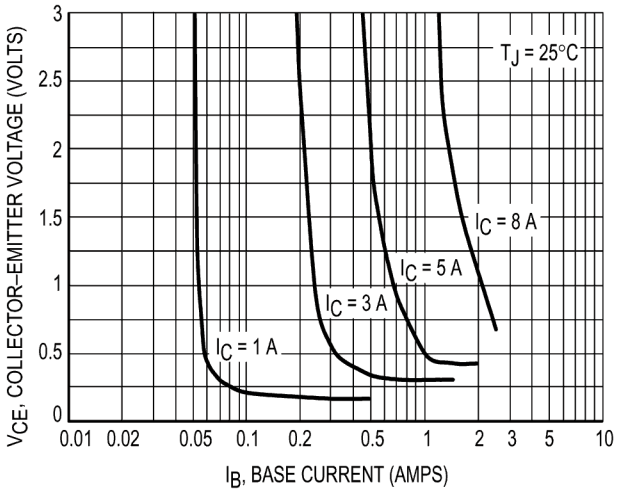
Datasheet.Cloud

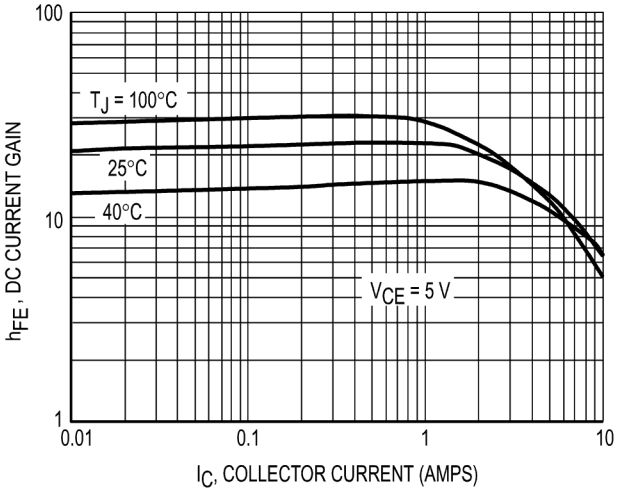
Typical Characteristics

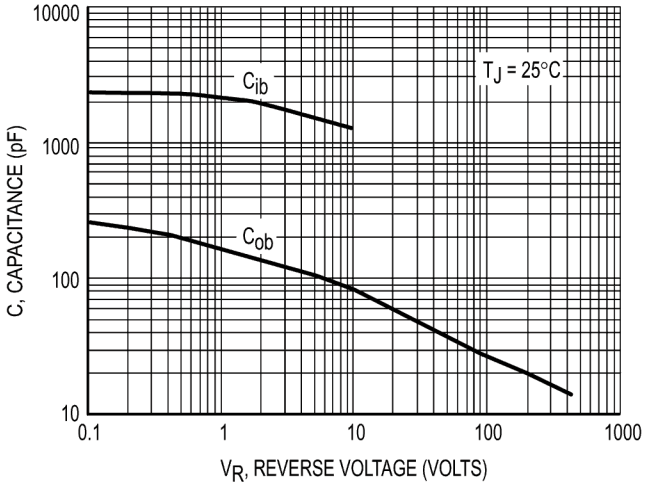
3DD13007

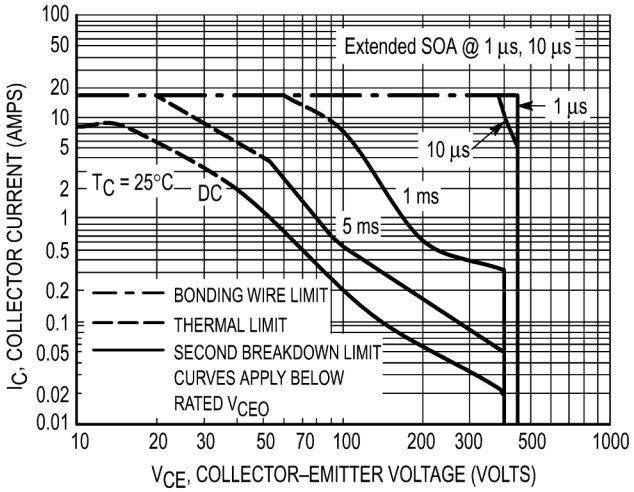




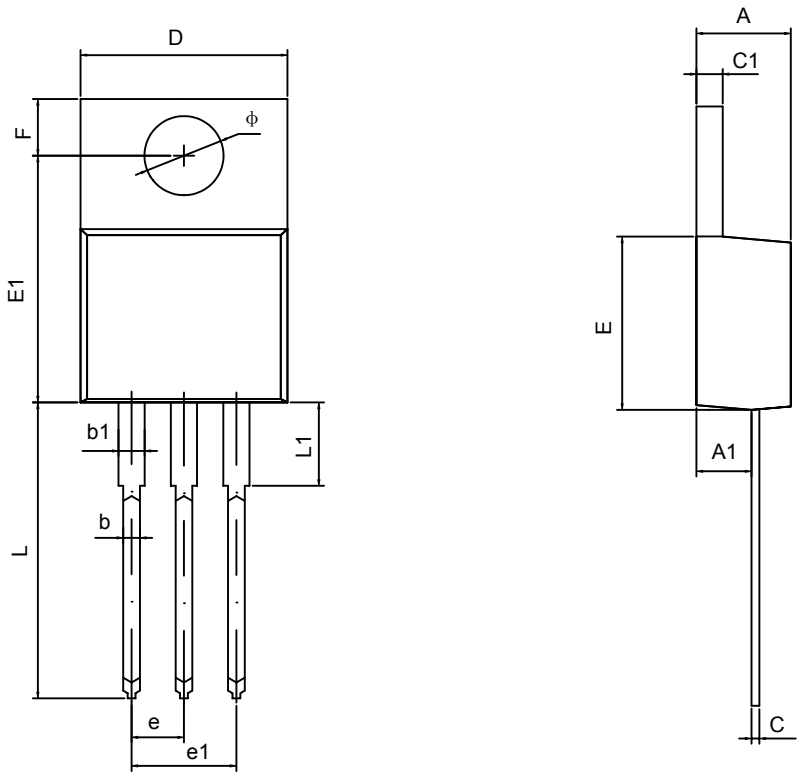








TO-220-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	1.176	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	1.710	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	2.540TYP		0.100TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
Φ	3.790	3.890	0.149	0.153