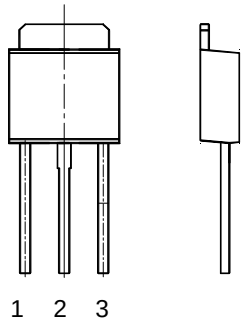
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-251 Plastic-Encapsulate Transistors

3DD13001 TRANSISTOR (NPN)

TO-251



FEATURES

Power dissipation

$P_{CM:}$ 1.2 W (Tamb=25℃)

Collector current

$I_{CM:}$ 0.2 A

Collector-base voltage

$V_{(BR)CBO}$: 600 V

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to +150℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	Ic= 100μA , I_E=0	600			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	I_C= 1 mA , I_B=0	400			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	I_E= 100 μA, I_C=0	7			V
Collector cut-off current	I_{CBO}	V_{CB}= 600 V , I_E=0			100	μA
Collector cut-off current	I_{CEO}	V_{CE}= 400 V , I_B=0			200	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 7 V , I_C=0			100	μA
DC current gain	$h_{FE(1)}$	V_{CE}= 20 V, I_C= 20mA	10		40	
	$h_{FE(2)}$	V_{CE}= 10V, I_C= 0.25 mA	5			
Collector-emitter saturation voltage	V_{CE}(sat)	I_C= 50mA, I_B= 10 mA			0.5	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C= 50 mA, I_B= 10mA			1.2	V
Base-emitter voltage	V_{BE}	I_E= 100 mA,			1.1	V
Transition frequency	f_T	V_{CE}= 20 V, I_C=20mA f = 1MHz	8			MHz
Fall time	t_f	I_C=50mA, I_{B1}=-I_{B2}=5mA, V_{CC}=45V			0.3	μs
Storage time	t_S				1.5	μs

CLASSIFICATION OF $h_{FE(1)}$

Rank						
Range	10-15	15-20	20-25	25-30	30-35	35-40