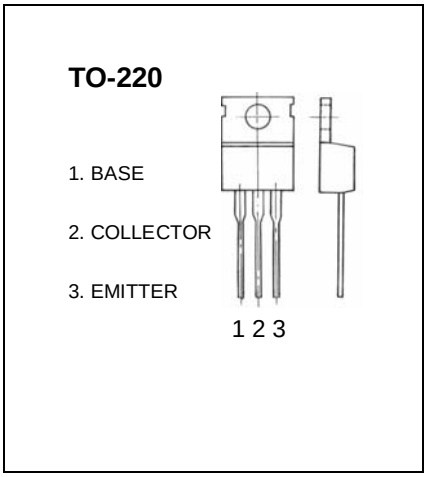
Transys Electronics LIMITED

TO-220 Plastic-Encapsulated Transistors

3DD13003 TRANSISTOR (NPN)



FEATURES

Power dissipation

$P_{CM:}$ 1.5 W (Tamb=25℃)

Collector current

$I_{CM:}$ 1.5 A

Collector-base voltage

$V_{(BR)CBO:}$ 700 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= 1000μA, 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= 1000μA, I_C=0	9			V
Collector cut-off current	I_{CBO}	V_{CB}= 700V, I_E=0			1000	μA
Collector cut-off current	I_{CEO}	V_{CE}= 400V, I_B=0			500	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 9V, I_C=0			1000	μA
DC current gain	$h_{FE(1)}$	V_{CE}= 2V, I_C= 0.5 A	8		40	
	$h_{FE(2)}$	V_{CE}= 10V, I_C= 0.5 mA	5			
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=1000mA, I_B=250 mA			1	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C=1000mA, I_B= 250mA			1.2	V
Base-emitter voltage	V_{BE}	I_E= 2000 mA			3	V
Transition frequency	f_T	Ic=100mA, V_{CE}=10V f=1MH_Z	5			MH_Z
Fall time	t_f	Vcc=100V, Ic=1A I_{B1}=-I_{B2}=0.2A			0.5	μS
Storage time	t_s				2.5	μS

CLASSIFICATION OF $h_{FE(1)}$

Rank							
Range	8-10	10-15	15-20	20-25	25-30	30-35	35-40