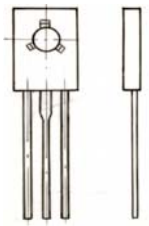
SHENZHEN HAOLIN ELECTRONICS TECHNOLOGY CO., LTD

TO-126 Plastic-Encapsulate Transistors

HR13003 TRANSISTOR (NPN)

TO-126



1.BASE

2.COLLECTOR

3.EMITTER

1 2 3

FEATURES

High total power disspation. (p_c=1.25w)

MARKING:MJE13003

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	480	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	1	A
P_C	Collector Dissipation	1.25	W
T_J, T_{stg}	Junction and Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

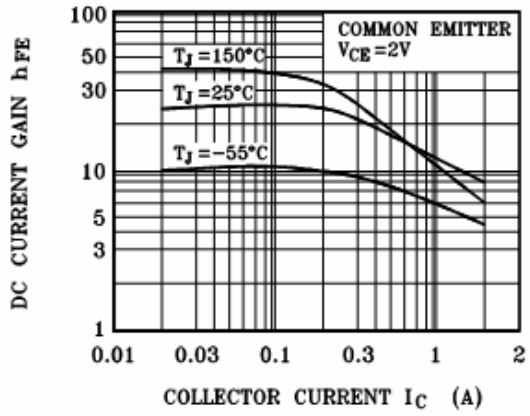
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 100μA, I_E=0	600			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 1mA,I_B=0	480			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}= 600V,I_E=0			100	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 6 V,I_C=0			100	μA
DC current gain	h_{FE1}	V_{CE}= 10V, I_C= 250 μA	5			
	h_{FE2}	V_{CE}= 10 V, I_C= 200mA	9		40	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=200mA, I_B= 40mA			0.8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=200mA, I_B= 40mA			1.2	V
Transition frequency	f_T	V_{CE}=10V, I_C=100mA f =1MHz	5			MHz
Fall time	t_f	I_C=1A, I_{B1}=-I_{B2}=0.2A V_{CC}=100V			0.8	μs
Storage time	t_s				3.5	μs

CLASSIFICATION OF h_{FE2}

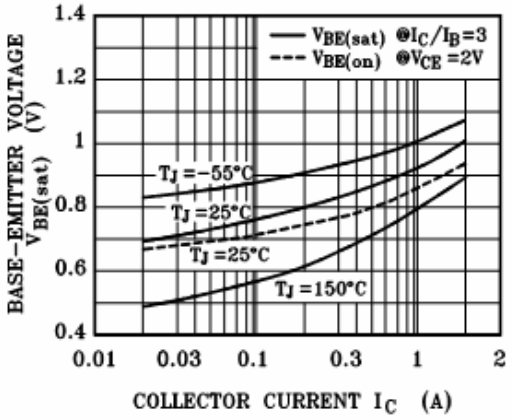
Rank						
Range	9-15	15-20	20-25	25-30	30-35	35-40

Typical Characteristics HR13003

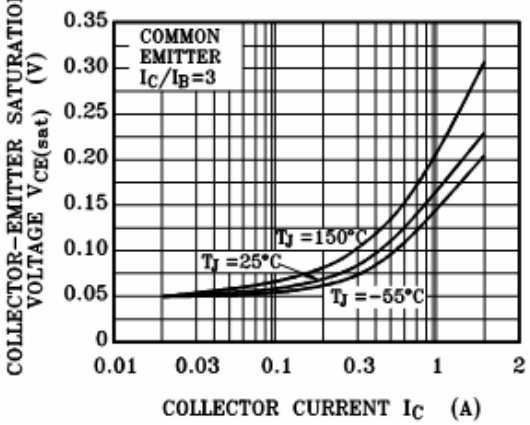
DC CURRENT GAIN



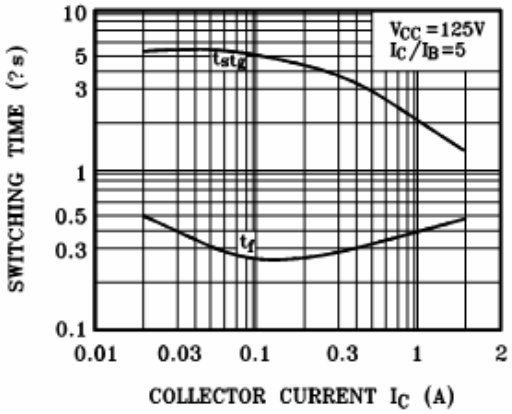
$V_{BE(sat)}$ – I_C



$V_{CE(sat)}$ – I_C



SWITCHING CHARACTERISTIC



P_C – Ta