MJE13003

NPN SILICON TRANSISTOR

FEATURES

Power dissipation

P_{CM} : 1.25 W (Tamb=25℃)

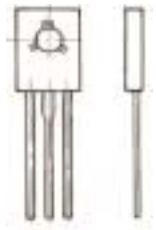
Collector current

I_{CM} : 1.5 A

Collector-base voltage

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

TO—126



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= 1000 μ A, I_E=0	700			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	Ic= 10 mA, I_B=0	400			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	I_E= 1000 μ A, I_C=0	9			V
Collector cut-off current	I_{CBO}	V_{CB}= 700 V, I_E=0			1000	μA
Collector cut-off current	I_{CEO}	V_{CE}= 400 V, I_B=0			500	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 9 V, I_C=0			1000	μA
DC current gain(note)	$H_{FE\ (1)}$	V_{CE}= 10 V, I_C= 150 mA	8		40	
	$H_{FE\ (2)}$	V_{CE}= 10 V, 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	V_{CE}=10V,Ic=100mA f =1MHz	5			MHz
Fall time	t_f	I_C=1A, I_{B1}=-I_{B2}=0.2A			0.5	μs
Storage time	t_s	V_{CC}=100V			2.5	μs

CLASSIFICATION OF $H_{FE(1)}$

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

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