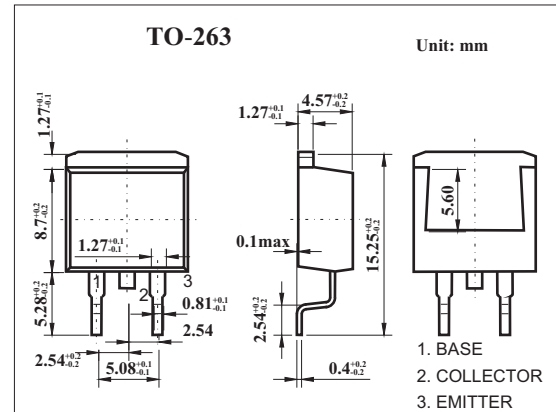


NPN Silicon Power Transistor

3DD13007

■ Features

- High Speed Switching
- Suitable for Switching Regulator and Motor Control



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V _{CBO}	700	V
Collector-Emitter Voltage	V _{CEO}	400	V
Emitter-Base Voltage	V _{EBO}	9	V
Collector Current -Continuous	I _C	8	A
Collector Dissipation	P _C	2	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 to 150	°C

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 1mA , I _E = 0	700			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 10mA , I _B = 0	400			V
Emitter-base Breakdown voltage	V _{(BR)EBO}	I _E = 1mA , I _C = 0	9			V
Collector-base cut-off current	I _{CBO}	V _{CB} = 700V , I _E = 0			1	mA
Emitter cut-off current	I _{EBO}	V _{EB} = 7V , I _C = 0			100	μA
DC current gain	h _{FE}	V _{CE} = 5V , I _C = 2A	8		40	
		V _{CE} = 5V , 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
Collector output capacitance	C _{ob}	V _{CE} = 10V , I _E = 0 , f = 0.1MHz		80		pF
Fall time	t _f	I _{B1} = -I _{B2} = 1A , I _C = 5A , V _{CC} = 125V			0.7	μs
Storage time	t _s	I _{B1} = -I _{B2} = 1A , I _C = 5A , V _{CC} = 125V			3	μs
Transition frequency	f _T	V _{CE} = 10 V , I _C = 500 mA , f = 1 MHz	4			MHz

■ h_{FE} Classification

Rank						
h _{FE}	8~15	15~20	20~25	25~30	30~35	35~40

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■ Typical Characteristics

