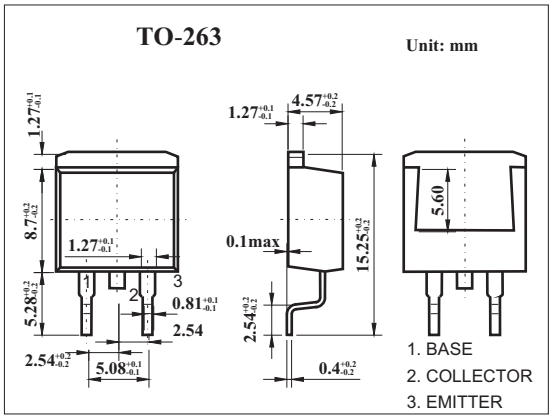
TY Semicondutor®

Product specification

3DD13007

■ Features

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



■ Absolute Maximum Ratings Ta = 25℃

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	℃
Storage Temperature	T_{stg}	-55 to 150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	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}=10,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