

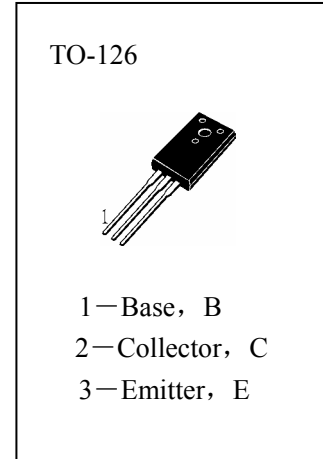
# HS1205

## APPLICATIONS

Large Current Switching

## ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)

T <sub>stg</sub>	—Storage Temperature	.....	-55~150°C
T <sub>j</sub>	—Junction Temperature	.....	150°C
P <sub>C</sub>	—Collector Dissipation (T <sub>c</sub> =25°C)	.....	10W
P <sub>C</sub>	—Collector Dissipation (T <sub>A</sub> =25°C)	.....	1W
V <sub>CBO</sub>	—Collector-Base Voltage	.....	-25V
V <sub>CEO</sub>	—Collector-Emitter Voltage	.....	-20V
V <sub>EBO</sub>	—Emitter-Base Voltage	.....	-5V
I <sub>C</sub>	—Collector Current	.....	-5A



## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	-25			V	I <sub>C</sub> =-10 μ A, I <sub>E</sub> =0
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	-20			V	I <sub>C</sub> =-1mA, I <sub>B</sub> =0
BV <sub>EBO</sub>	Emitter-Base Breakdown Voltage	-5			V	I <sub>E</sub> =-10 μ A, I <sub>C</sub> =0
I <sub>CBO</sub>	Collector Cut-off Current			-500	nA	V <sub>CB</sub> =-20V, I <sub>E</sub> =0
I <sub>EBO</sub>	Emitter Cut-off Current			-500	nA	V <sub>EB</sub> =-4V, I <sub>C</sub> =0
H <sub>FE</sub> (1)	DC Current Gain	100		400		V <sub>CE</sub> =-2V, I <sub>C</sub> =-500mA
H <sub>FE</sub> (2)	DC Current Gain	60				V <sub>CE</sub> =-2V, I <sub>C</sub> =-4A
V <sub>CE(sat1)</sub>	Collector- Emitter Saturation Voltage		-250	-500	mV	I <sub>C</sub> =-3A, I <sub>B</sub> =-60mA
V <sub>CE(sat2)</sub>	Collector- Emitter Saturation Voltage		-1.0	-1.3	V	I <sub>C</sub> =-3A, I <sub>B</sub> =-60mA
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage		-0.94	-1.2	V	I <sub>C</sub> =-3A, I <sub>B</sub> =-60mA
f <sub>t</sub>	Current Gain-Bandwidth Product		320		MHz	V <sub>CE</sub> =-5V, I <sub>C</sub> =-200mA,
C <sub>ob</sub>	Output Capacitance		60		pF	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz
t <sub>ON</sub>	Turn-On Time			40	nS	} See specified test circuit
t <sub>STG</sub>	Storage Time			200	nS	
t <sub>F</sub>	Fall Time			10	nS	

## h<sub>FE</sub> Classification

R	S	T
100—200	140—280	200—400