

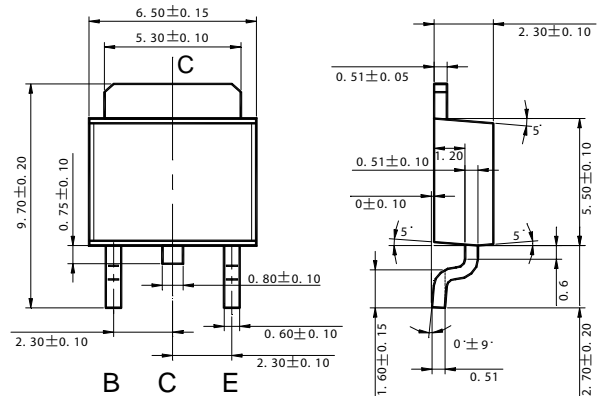
RoHS Compliant Product

TO-252

**FEATURES**

- Large current capacitance
- Low collector-to-emitter saturation voltage
- High-speed switching
- High allowable power dissipation

MARKING : 5706  
(With Date Code)



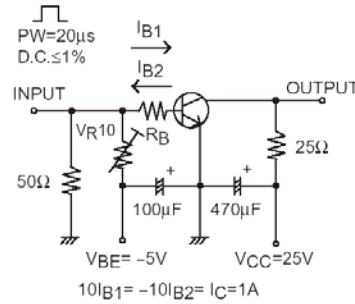
**MAXIMUM RATINGS\* T<sub>A</sub>=25°C unless otherwise noted**

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V <sub>CB0</sub>	80	V
Collector-Emitter Voltage	V <sub>CES</sub>	80	V
Collector-Emitter Voltage	V <sub>CEO</sub>	50	V
Emitter-Base Voltage	V <sub>EBO</sub>	6	V
Collector Current	I <sub>CBO</sub>	5	A
Collector Current (Pulse)	I <sub>CP</sub>	7.5	A
Base Current	I <sub>B</sub>	1.2	A
Junction Temperature	T <sub>j</sub>	+150	°C
Storage Temperature	T <sub>STG</sub>	-55~+150	°C
Total Power Dissipation	P <sub>D</sub>	0.8	W
	P <sub>D</sub> (T <sub>C</sub> =25°C)	15	W

**ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Min	Typ.	Max	Unit.	Test Conditions
Collector-Base Breakdown Voltage	BV <sub>CB0</sub>	80	-	-	V	I <sub>C</sub> =10μA, I <sub>E</sub> =0
Collector-Emitter Breakdown Voltage	BV <sub>CES</sub>	80	-	-	V	I <sub>C</sub> =100μA, R <sub>BE</sub> =0
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	50	-	-	V	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	6	-	-	V	I <sub>E</sub> =10μA, I <sub>C</sub> =0
Collector-Base Cutoff Current	I <sub>CBO</sub>	-	-	1	μA	V <sub>CB</sub> =40V, I <sub>E</sub> =0
Emitter-Base Cutoff Current	I <sub>EBO</sub>	-	-	1	μA	V <sub>EB</sub> =4V, I <sub>C</sub> =0
Collector Saturation Voltage 1	*V <sub>CE(sat)1</sub>	-	-	135	mV	I <sub>C</sub> =1A, I <sub>B</sub> =50mA
Collector Saturation Voltage 2	*V <sub>CE(sat)2</sub>	-	-	240	mV	I <sub>C</sub> =2A, I <sub>B</sub> =100mA
Base Saturation Voltage	*V <sub>BE(sat)</sub>	-	-	1.2	V	I <sub>C</sub> =2A, I <sub>B</sub> =100mA
DC Current Gain	*h <sub>FE</sub>	200	-	560		V <sub>CE</sub> =2V, I <sub>C</sub> =500mA
Gain-Bandwidth Product	f <sub>T</sub>	-	400	-	MHz	V <sub>CE</sub> =10V, I <sub>C</sub> =500mA
Output Capacitance	C <sub>ob</sub>	-	15	-	pF	V <sub>CB</sub> =10V, f=1MHz
Turn-On Time	t <sub>on</sub>	-	35	-	ns	See specified test circuit.
Storage Time	t <sub>stg</sub>	-	300	-	ns	See specified test circuit.
Fall Time	t <sub>f</sub>	-	20	-	ns	See specified test circuit.

**SwitchingTimeTest Circuit**



**Characteristics Curve**

