

# **ISC Silicon NPN Power Transistor**

#### **DESCRIPTION**

- · High Collector-Base Breakdown Voltage-
  - : V<sub>(BR)CBO</sub>= 800V (Min)
- · High Switching Speed
- · Low Collector Saturation Voltage-
  - : V<sub>CE(sat)</sub>= 1.0V(Max.)@ I<sub>C</sub>= 0.5A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

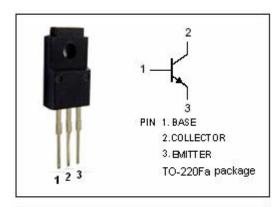
## **APPLICATIONS**

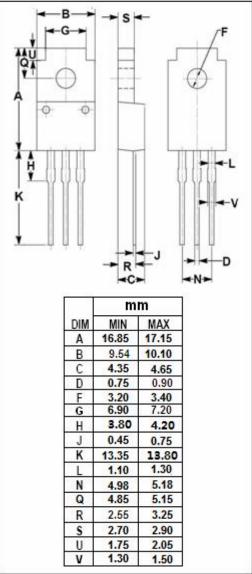


· Designed for high voltage switching applications.

### ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT	
V <sub>CBO</sub>	Collector-Base Voltage	800	V	
V <sub>CEO</sub>	Collector-Emitter Voltage 400		V	
V <sub>EBO</sub>	Emitter-Base Voltage	5	V	
Ic	Collector Current-Continuous	3	А	
Ісм	Collector Current-Peak	6	А	
lΒ	Base Current-Continuous 1.5		А	
Pc	Collector Power Dissipation @ Tc=25°C	30	W	
	Collector Power Dissipation @ T <sub>a</sub> =25℃	2		
TJ	Junction Temperature	150	°C	
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C	







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2SD1571

#### **ELECTRICAL CHARACTERISTICS**

Tc=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA; I <sub>B</sub> = 0	400			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 0.5A; I <sub>B</sub> = 50mA			1.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 0.5A; I <sub>B</sub> = 50mA			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 800V; I <sub>E</sub> = 0			1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			1	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 10mA; V <sub>CE</sub> = 5V	8			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 5V	10			
fτ	Current-Gain—Bandwidth Product	I <sub>E</sub> = 0.1A; V <sub>CE</sub> = 10V		4		MHz
Сов	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1.0MHz		75		pF
t <sub>r</sub>	Rise Time	I <sub>C</sub> = 0.5A; I <sub>B1</sub> = I <sub>B2</sub> = 0.05A R <sub>L</sub> = 10 Ω;V <sub>CC</sub> ≈200V P <sub>W</sub> =20 μ s;Duty Cycle≤2%			1.0	μS

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