

isc Silicon NPN Power Transistor

2SC3571

DESCRIPTION

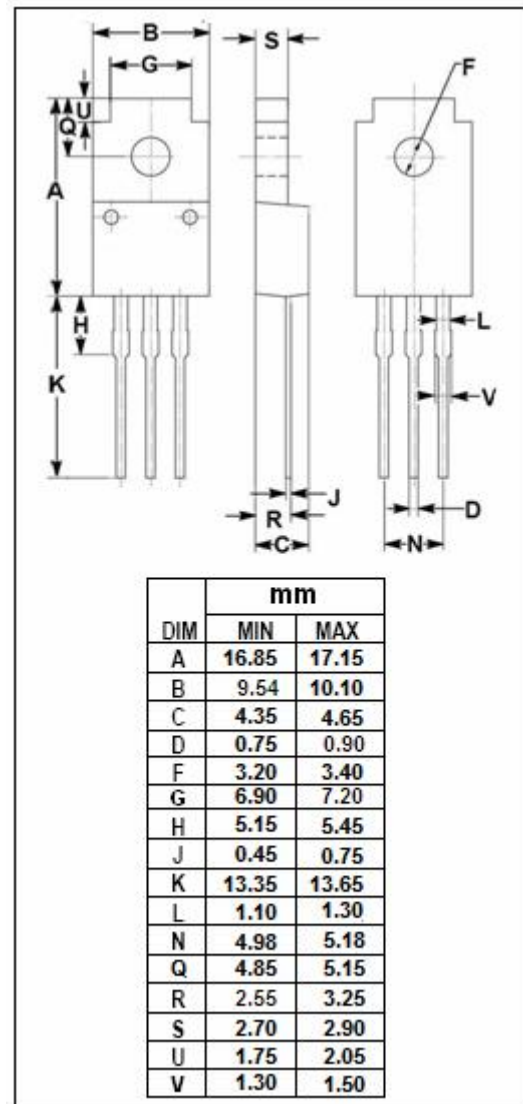
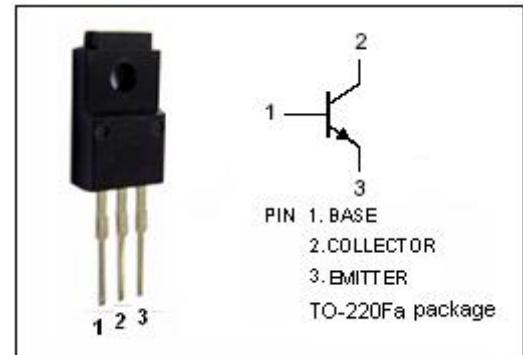
- Collector-Emitter Sustaining Voltage
: $V_{CEO(SUS)} = 400V(\text{Min.})$
- Low Collector Saturation Voltage
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for switching regulator, DC-DC converter and high frequency power amplifier applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	3.5	A
P_C	Total Power Dissipation @ $T_C=25^\circ\text{C}$	30	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO}	Collector-Emitter Sustaining Voltage	I _C = 30mA; I _B = 0	400		V
V _{CEX(SUS)-1}	Collector-Emitter Sustaining Voltage	I _C = 3A; I _{B1} =-I _{B2} = 0.6A, L=180 μ H,clamped	450		V
V _{CEX(SUS)-2}	Collector-Emitter Sustaining Voltage	I _C = 6A; I _{B1} = 2A; I _{B2} = -0.6A, L= 180 μ H,clamped	400		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 0.6A		1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 3A; I _B = 0.6A		1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 400V; I _E = 0		10	μ A
I _{CER}	Collector Cutoff Current	V _{CE} = 400V; R _{BE} = 51 Ω, T _a =125°C		1.0	mA
I _{CEx}	Collector Cutoff Current	V _{CE} = 400V; V _{BE(off)} = -1.5V V _{CE} = 400V; V _{BE(off)} = -1.5V, T _a =125°C		10 1.0	μ A mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C =0		10	μ A
h _{FE-1}	DC Current Gain	I _C = 0.1A; V _{CE} = 5V	20	80	
h _{FE-2}	DC Current Gain	I _C = 1.0A; V _{CE} = 5V	20	80	
h _{FE-3}	DC Current Gain	I _C = 3.0A; V _{CE} = 5V	10		

Switching times

t _{on}	Turn-on Time	I _C = 3A, R _L = 50 Ω, I _{B1} = -I _{B2} = 0.6A, V _{CC} ≈ 150V		1.0	μ s
t _{stg}	Storage Time			2.5	μ s
t _f	Fall Time			1.0	μ s

◆ h_{FE-2} Classifications

M	L	K
20-40	30-60	40-80

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