

isc Silicon NPN Power Transistor

2SC4381

DESCRIPTION

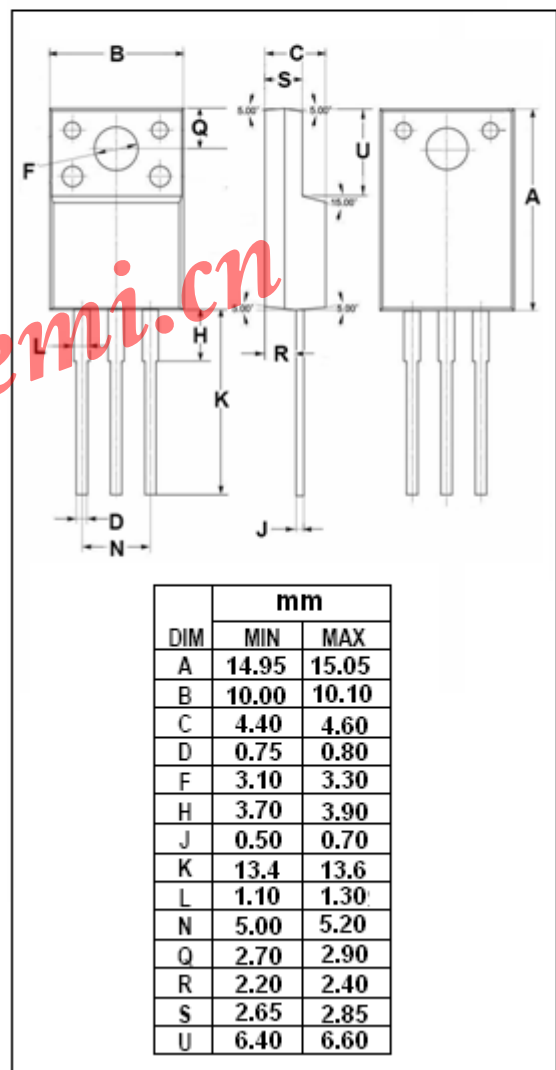
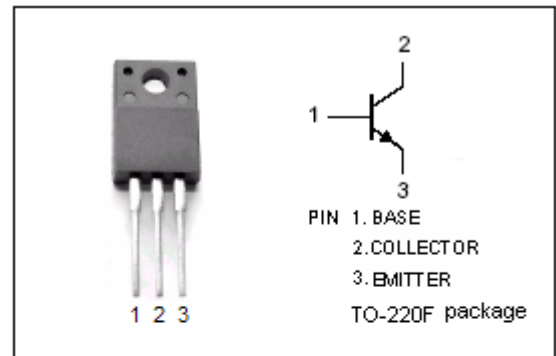
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 150V(\text{Min})$
- DC Current Gain-  
:  $h_{FE} = 60(\text{Min})@ (V_{CE} = 10V, I_C = 0.7A)$
- Complement to Type 2SA1667

APPLICATIONS

- Designed for TV vertical output ,audio output driver and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	150	V
$V_{CEO}$	Collector-Emitter Voltage	150	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	2	A
$I_B$	Base Current-Continuous	1	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	25	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



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## ELECTRICAL CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 25mA ; I <sub>B</sub> = 0	150			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 0.7A; I <sub>B</sub> = 0.07A			1.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 150V ; I <sub>E</sub> = 0			10	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> = 0			10	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 0.7A ; V <sub>CE</sub> = 10V	60			
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f= 1MHz		35		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>E</sub> = -0.2A ; V <sub>CE</sub> = 12V		15		MHz

## Switching Times

t <sub>on</sub>	Turn-On Time	I <sub>C</sub> = 1A; I <sub>B1</sub> = -I <sub>B2</sub> = 0.1A; V <sub>CC</sub> = 20V; R <sub>L</sub> = 20 Ω		1.0		μ s
t <sub>stg</sub>	Storage Time			3.0		μ s
t <sub>f</sub>	Fall Time			1.5		μ s