

**isc Silicon NPN Power Transistor**

**2SC4806**

**DESCRIPTION**

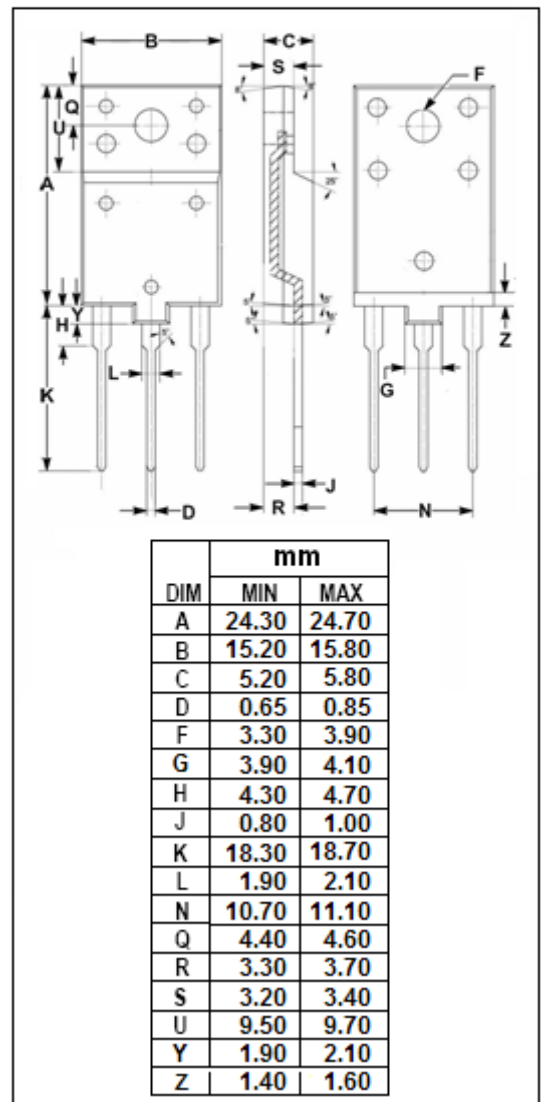
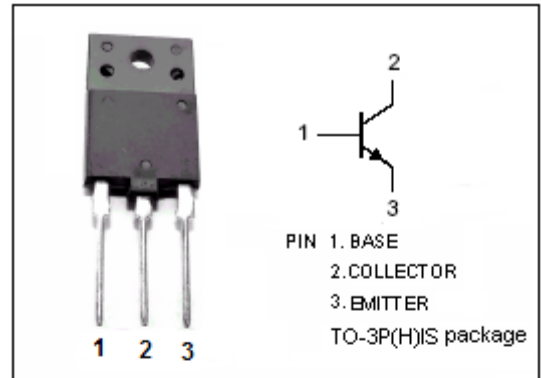
- High Breakdown Voltage-  
:  $V_{CBO}=1700V(\text{Min})$
- High Switching Speed
- Low Saturation Voltage

**APPLICATIONS**

- Horizontal deflection output for high resolution display.
- High speed switching power supply output applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1700	V
$V_{CEO}$	Collector-Emitter Voltage	600	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	5	A
$I_{CM}$	Collector Current-Peak	10	A
$I_B$	Base Current-Continuous	2.5	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	50	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<sub>C</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> = 5mA; I <sub>B</sub> = 0	600			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 3.5A; I <sub>B</sub> = 1A			5.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 3.5A; I <sub>B</sub> = 1A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 1700V; I <sub>E</sub> = 0			1.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			10	μA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 5V	8			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 3.5A; V <sub>CE</sub> = 5V	3.5		7.5	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.1A; V <sub>CE</sub> = 10V		3		MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1.0MHz		240		pF

Switching Times; Resistive Load

t <sub>stg</sub>	Storage Time	I <sub>C</sub> = 3.5A; I <sub>B1</sub> = 0.7A; I <sub>B2</sub> = -1.4A; R <sub>L</sub> = 56Ω			3.0	μs
t <sub>f</sub>	Fall Time				0.2	μs