

isc Silicon NPN Power Transistor

2SC4806

DESCRIPTION

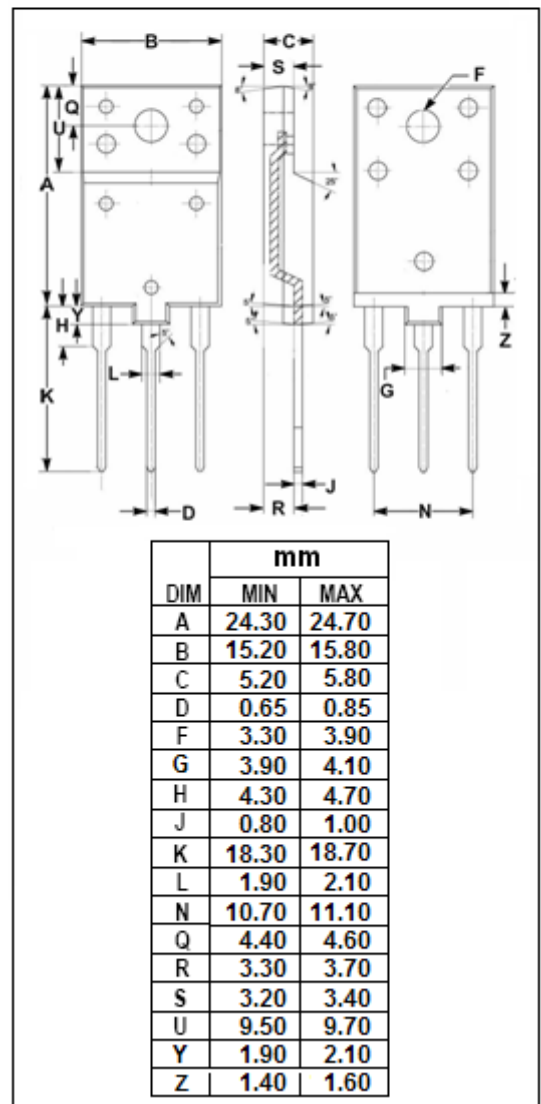
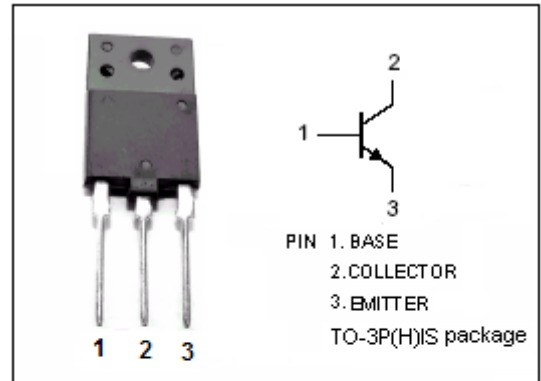
- High Breakdown Voltage-
: $V_{CBO}= 1700V(\text{Min})$
- High Switching Speed
- Low Saturation Voltage

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

 $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=5\text{mA}; I_B=0$	600			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3.5\text{A}; I_B=1\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3.5\text{A}; I_B=1\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=1700\text{V}; I_E=0$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			10	μA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	8			
h_{FE-2}	DC Current Gain	$I_C=3.5\text{A}; V_{CE}=5\text{V}$	3.5		7.5	
f_T	Current-Gain—Bandwidth Product	$I_C=0.1\text{A}; V_{CE}=10\text{V}$		3		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{\text{test}}=1.0\text{MHz}$		240		pF

Switching Times; Resistive Load

t_{stg}	Storage Time	$I_C=3.5\text{A}; I_{B1}=0.7\text{A}; I_{B2}=-1.4\text{A}; R_L=56\Omega$			3.0	μs
t_f	Fall Time				0.2	μs