

# isc Silicon NPN Power Transistor

## 2SC3893A

### DESCRIPTION

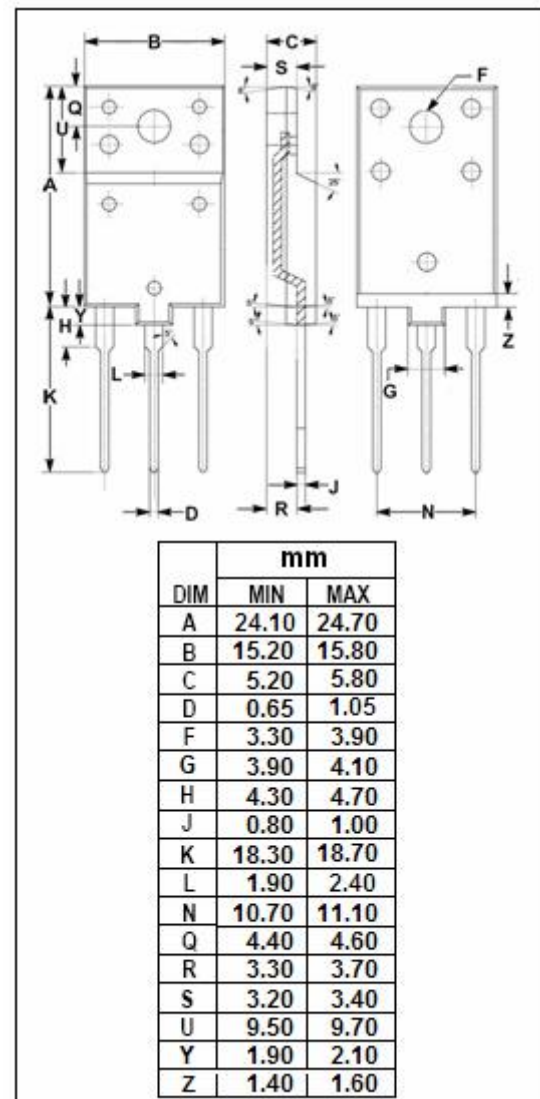
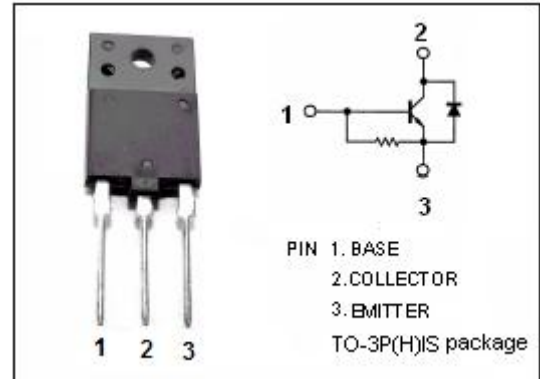
- High Breakdown Voltage-  
:  $V_{CBO} = 1500V$  (Min)
- High Switching Speed
- Low Saturation Voltage
- Built-in Damper Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for horizontal deflection output applications

### ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CEO}$	Collector-Emitter Voltage	600	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current- Continuous	8	A
$I_{CM}$	Collector Current- Peak	15	A
$I_B$	Base Current- Continuous	4	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	50	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



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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)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 200mA; I <sub>C</sub> = 0	5			V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 50 μA; I <sub>E</sub> = 0	1500			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 6A; I <sub>B</sub> = 1.5A			5.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 6A; I <sub>B</sub> = 1.5A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 500V; I <sub>E</sub> = 0			10	μA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0	66		200	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 5V	8			
V <sub>ECF</sub>	C-E Diode Forward Voltage	I <sub>F</sub> = 6A			2.0	V
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		210		pF
Switching Times , Resistive load						
t <sub>stg</sub>	Storage Time	I <sub>CP</sub> = 6A, I <sub>B1</sub> = 1.2A; I <sub>B2</sub> = -2.4A; R <sub>L</sub> = 33.3 Ω			2.5	μs
t <sub>f</sub>	Fall Time				0.2	μs

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