

**isc Silicon NPN Power Transistor**
**2SC3638**
**DESCRIPTION**

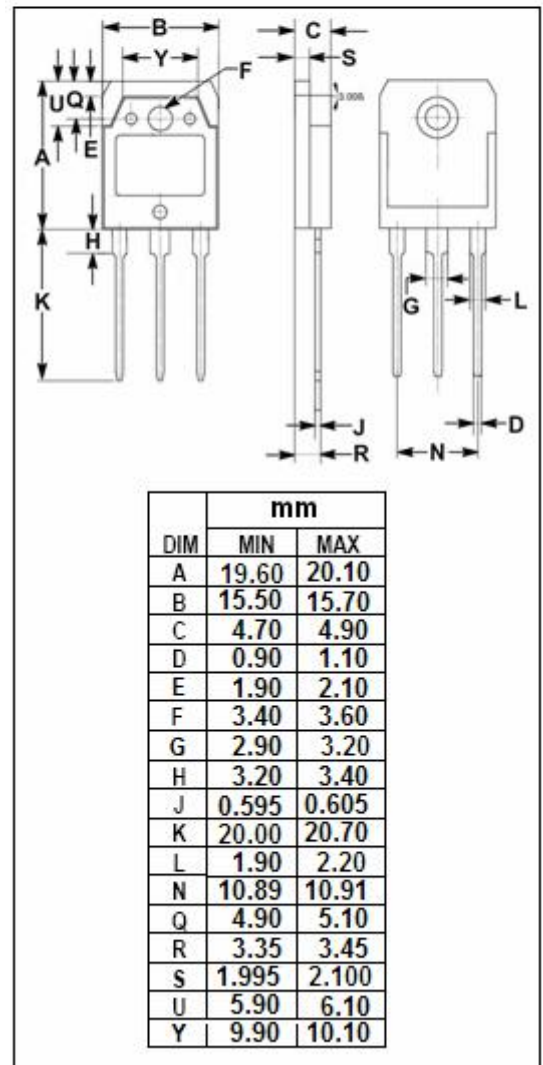
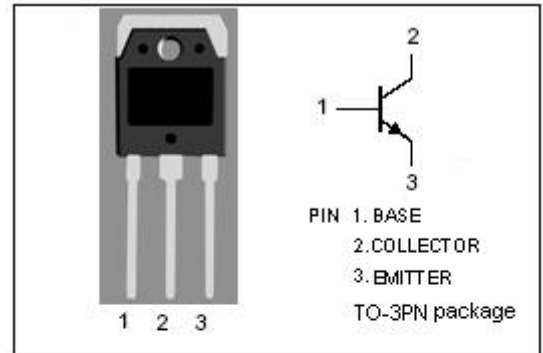
- High Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 500V(\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for ultrahigh-definition CRT display horizontal deflection output applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	900	V
$V_{CEO}$	Collector-Emitter Voltage	500	V
$V_{EBO}$	Emitter-Base voltage	7	V
$I_C$	Collector Current-Continuous	15	A
$I_{CM}$	Collector Current-Peak	25	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	100	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>CE0(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 100mA; I <sub>B</sub> = 0	500			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 7A; I <sub>B</sub> = 1.4A			2.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 7A; I <sub>B</sub> = 1.4A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 500V; I <sub>E</sub> = 0			10	μ A
I <sub>CES</sub>	Collector Cutoff Current	V <sub>CE</sub> = 900V; R <sub>BE</sub> = 0			0.5	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			1	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1.4A; V <sub>CE</sub> = 5V	8			
<b>Switching Times</b>						
t <sub>stg</sub>	Storage Time	I <sub>C</sub> = 7A, I <sub>B1</sub> = 1.4A; I <sub>B2</sub> = -2.8A			3.0	μ s
t <sub>f</sub>	Fall Time				0.2	μ s

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