

isc Silicon NPN Power Transistors

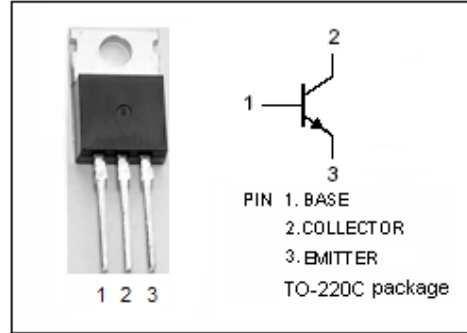
2SC3590

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 150V(\text{Min})$
- Fast Switching Speed
- Low Saturation Voltage

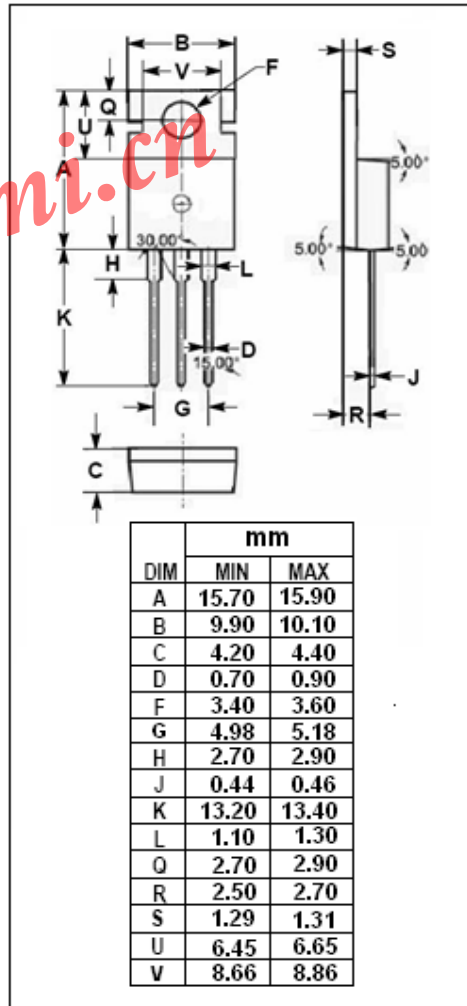
APPLICATIONS

- Designed for high 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	330	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak	12	A
I_B	Base Current-Continuous	4	A
P_T	Total 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
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	330			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; R_{BE}=\infty$	150			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=0.5\text{A}$			0.8	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=0.5\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=180\text{V}; I_E=0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			100	μA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=1\text{V}$	15			
h_{FE-2}	DC Current Gain	$I_C=5\text{A}; V_{CE}=1\text{V}$	10		50	
f_T	Current-Gain Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}$		40		MHz
t_f	Fall Time	$I_C=5\text{A}, I_{B1}=-I_{B2}=0.5\text{A}$			0.3	μs