

isc Silicon NPN Power Transistors

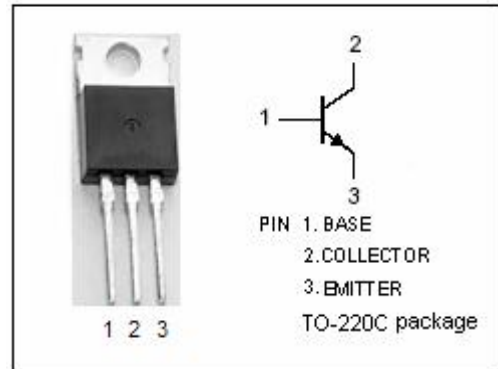
2SC3590

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 150V(\text{Min})$
- Fast Switching Speed
- Low Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

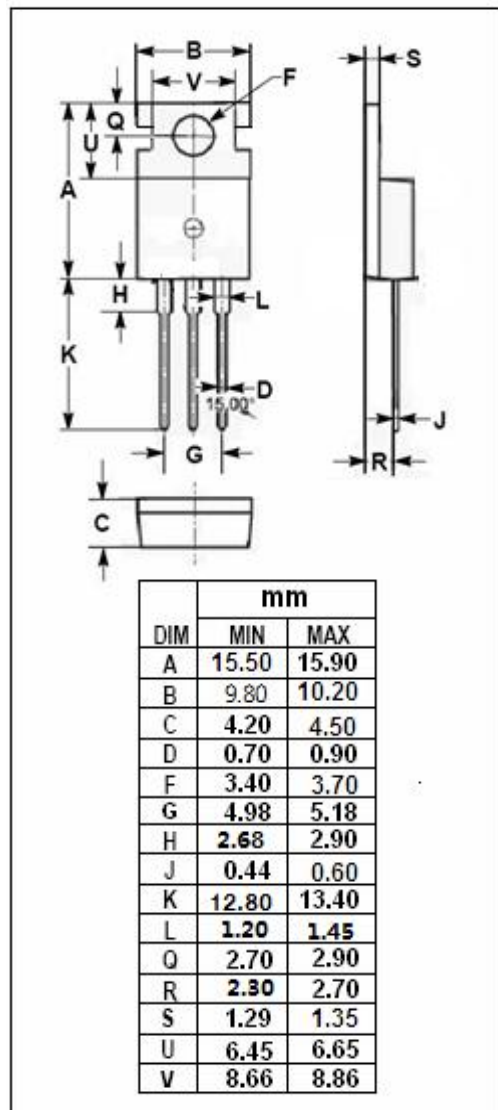
APPLICATIONS

- 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°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	330			V
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 1mA; R _{BE} = ∞	150			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1m A; I _C = 0	6			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			0.8	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 180V; I _E = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			100	μ A
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} = 1V	15			
h _{FE-2}	DC Current Gain	I _C = 5A; V _{CE} = 1V	10		50	
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		40		MHz
t _f	Fall Time	I _C = 5A, I _{B1} = -I _{B2} = 0.5A			0.3	μ s

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