

isc Silicon NPN Power Transistor

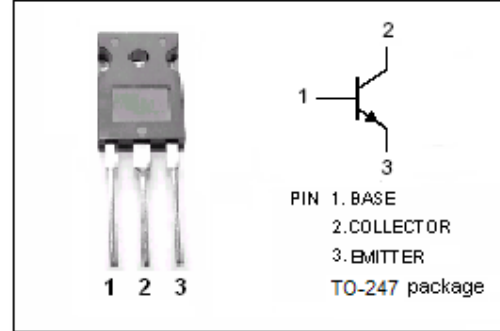
2SC4313

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 800V(\text{Min})$
- Fast Switching speed

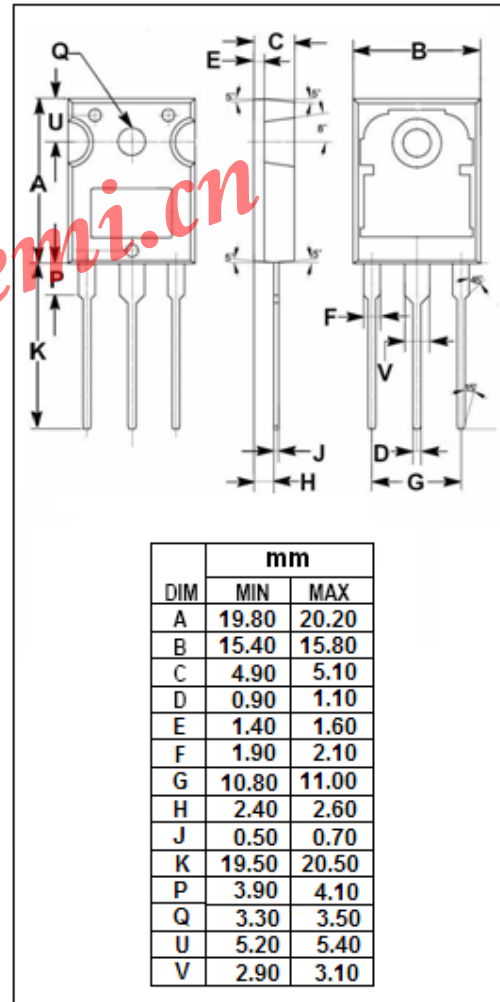
APPLICATIONS

- Color TV horizontal 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	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	4	A
I_{BM}	Base Current-Peak	8	A
P_T	Total 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	$^{\circ}\text{C}$



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.2	$^{\circ}\text{C}/\text{W}$

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.2\text{A}; I_B=0$	800			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$			2.5	V
I_{CBO}	Collector Cutoff Current	At rated Voltage			100	μA
I_{CEO}	Collector Cutoff Current	At rated Voltage			200	μA
I_{EBO}	Emitter Cutoff Current	At rated Voltage			100	μA
h_{FE-1}	DC Current Gain	$I_C=5\text{A}; V_{CE}=2\text{V}$		7		
h_{FE-2}	DC Current Gain	$I_C=1\text{mA}; V_{CE}=2\text{V}$	5			
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=10\text{V}$		7		MHz

Switching times

t_{on}	Turn-on Time	$I_C=5\text{A}, I_{B1}=-I_{B2}=1\text{A};$ $R_L=50\ \Omega; V_{BB2}=4\text{V};$ $V_{CC}=250\text{V}$			0.5	μs
t_{stg}	Storage Time				3.0	μs
t_f	Fall Time				0.5	μs