

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Power Transistor

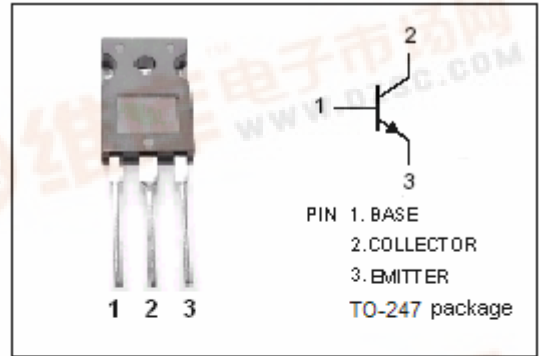
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DESCRIPTION

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

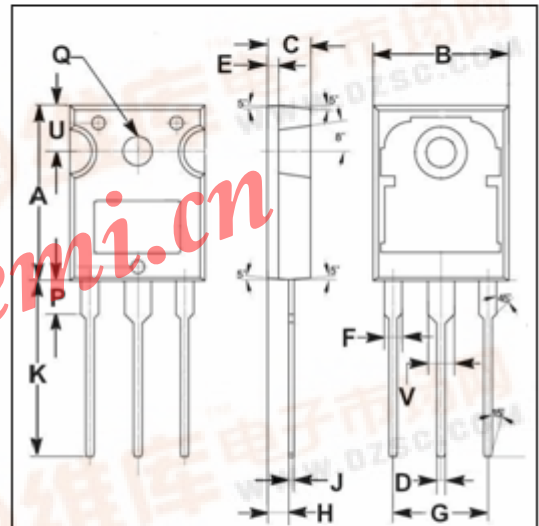
APPLICATIONS

- Color TV horizontal output applications



ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1200	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 @ $T_C=25^\circ\text{C}$	150	W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature Range	-55~150	°C



DIM	mm	
	MIN	MAX
A	19.80	20.20
B	15.40	15.80
C	4.90	5.10
D	0.90	1.10
E	1.40	1.60
F	1.90	2.10
G	10.80	11.00
H	2.40	2.60
J	0.50	0.70
K	19.50	20.50
P	3.90	4.10
Q	3.30	3.50
U	5.20	5.40
V	2.90	3.10

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.83	°C/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	$I_C=5\text{A}; I_B=1\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	At rated Voltage			100	μA
I_{CEO}	Collector Cutoff Current	At rated Voltage			100	μA
I_{EBO}	Emitter Cutoff Current	At rated Voltage			100	μA
h_{FE-1}	DC Current Gain	$I_C=5\text{A}; V_{CE}=5\text{V}$	8			
h_{FE-2}	DC Current Gain	$I_C=1\text{mA}; V_{CE}=5\text{V}$	5			
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=10\text{V}$		8		MHz

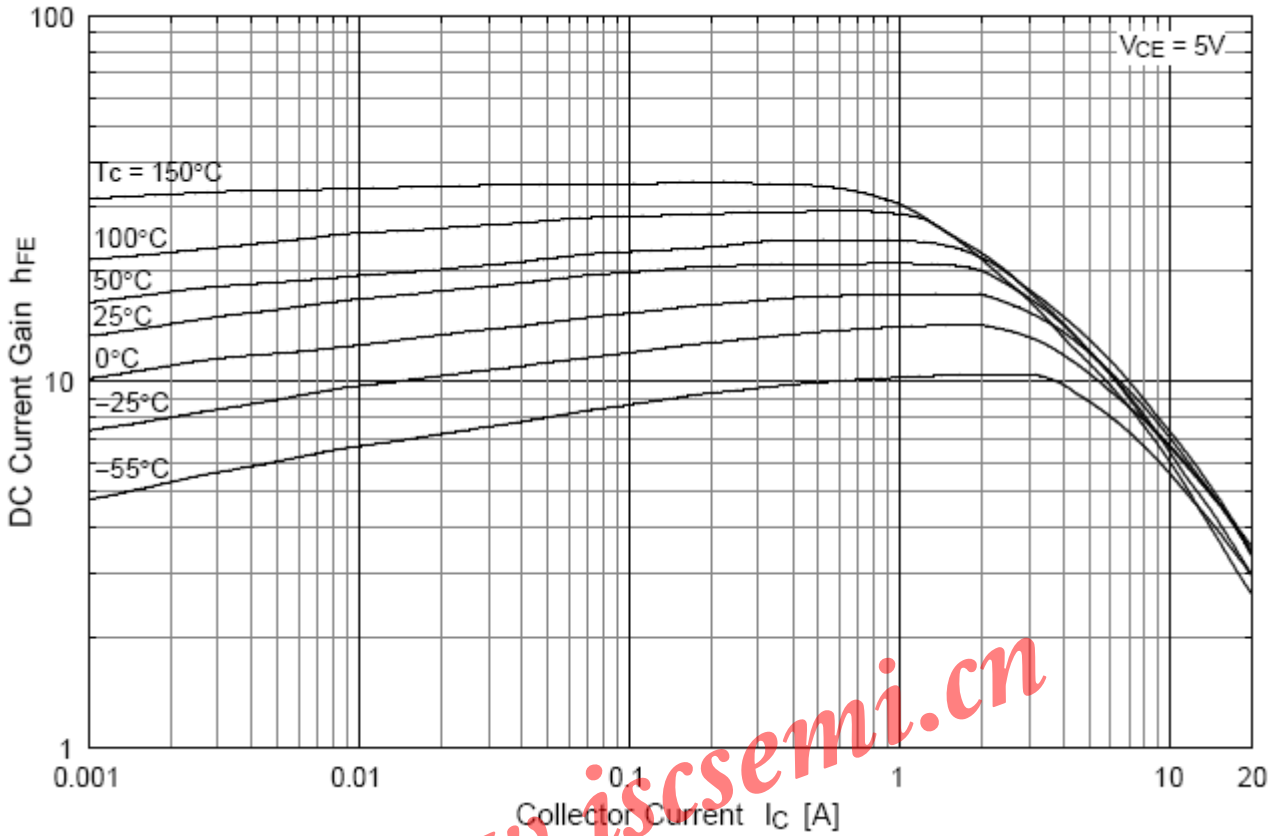
Switching times

t_{on}	Turn-on Time	$I_C=5\text{A}, I_{B1}=1\text{A}; I_{B2}=-2\text{A}$ $R_L=50\Omega; V_{BB2}=4\text{V}$			0.5	μs
t_{stg}	Storage Time				3.5	μs
t_f	Fall Time				0.3	μs

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$h_{FE}-I_C$ Characteristics



$V_{CE(sat)}-I_B$ & $V_{BE(sat)}-I_B$ Characteristics

