

isc Silicon NPN Power Transistor

2SC5148

DESCRIPTION

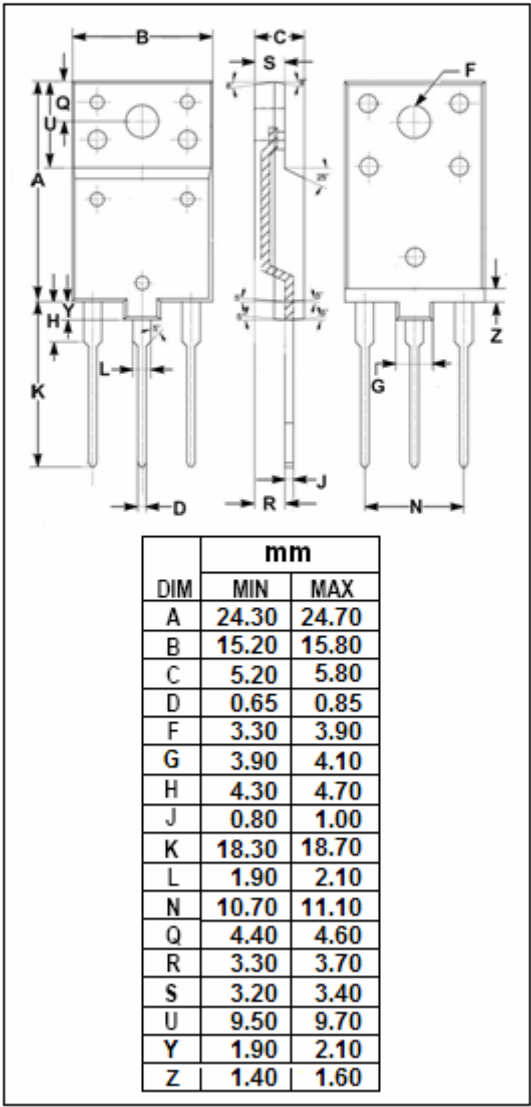
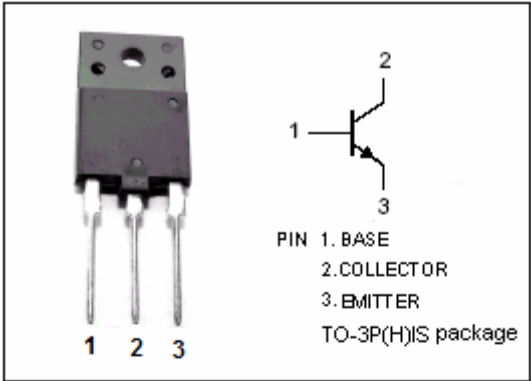
- High Breakdown Voltage-
: $V_{CBO}=1500V$ (Min)
- High Switching Speed
- Low Saturation Voltage

APPLICATIONS

- Horizontal deflection output for high resolution display, color TV
- High speed switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	600	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current- Continuous	8	A
I_{CP}	Collector Current-Pulse	16	A
I_B	Base Current- Continuous	4	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}C$	50	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$



ISC Silicon NPN Power Transistor**2SC5148****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

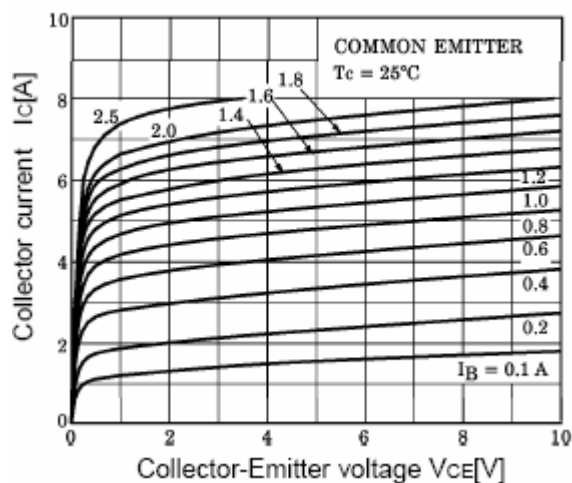
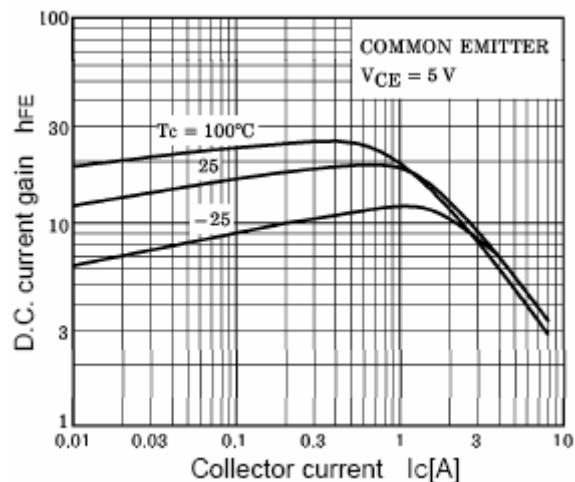
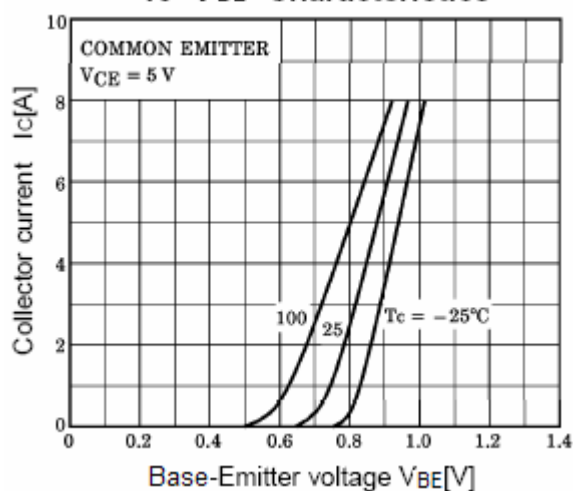
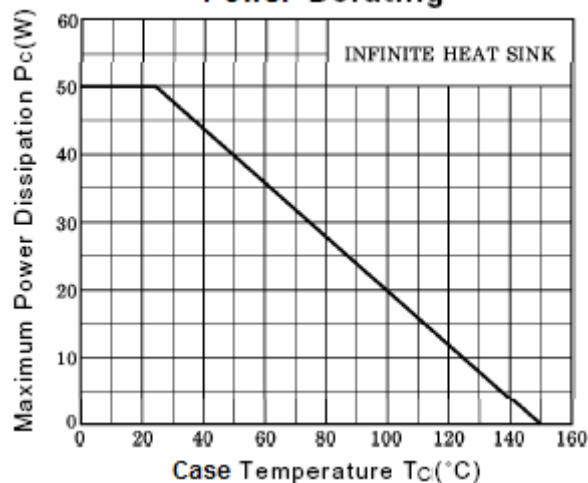
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA ; I _B = 0	600			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 1.3A			5.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 1.3A			1.3	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 1500V ; I _E = 0			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V ; I _C = 0			10	μ A
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 5V	8		25	
h _{FE-2}	DC Current Gain	I _C = 5A ; V _{CE} = 5V	3.8		8.0	
f _T	Current-Gain—Bandwidth Product	I _C = 0.1A ; V _{CE} = 10V		2		MHz
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V; f _{test} = 1.0MHz		110		pF

Switching times

t _{stg}	Storage Time	I _{CP} = 4A , I _{B1} = 0.8A ; f _H = 64kHz			4.0	μ s
t _f	Fall Time				0.3	μ s

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 I_C - V_{CE} Characteristics **h_{FE} - I_C Characteristics** **I_C - V_{BE} Characteristics****Power Derating****Safe Operating Area**