

isc Silicon NPN Power Transistor

2SD1847

DESCRIPTION

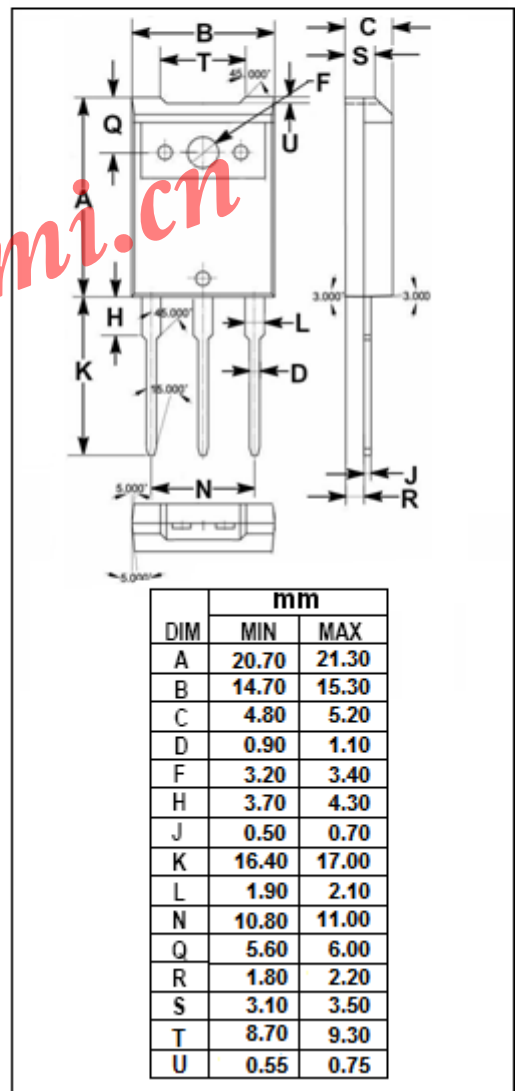
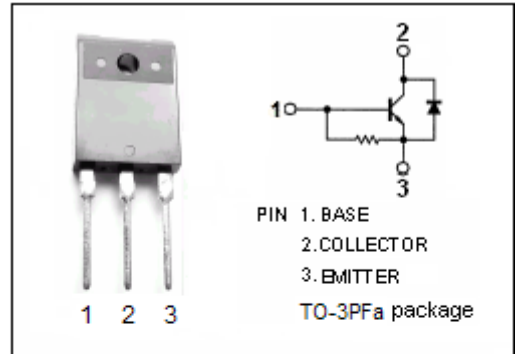
- Collector-Base Breakdown Voltage- : $V_{CBO}= 1500V$ (Min.)
- High Switching Speed
- Built-in Damper Diode

APPLICATIONS

- Designed for horizontal deflection output applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector- Base Voltage	1500	V
V_{CES}	Collector-Emitter Voltage	1500	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current- Continuous	2	A
P_C	Collector Power Dissipation @ $T_a=25^\circ C$	3	W
	Collector Power Dissipation @ $T_c=25^\circ C$	100	
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=500\text{mA}; I_C=0$	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=1\text{A}$			8.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=1\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=750\text{V}; I_E=0$ $V_{CB}=1500\text{V}; I_E=0$			10 1.0	μA mA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	5		25	
h_{FE-2}	DC Current Gain	$I_C=4\text{A}; V_{CE}=10\text{V}$	4			
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=10\text{V}$		2		MHz
V_{ECF}	C-E Diode Forward Voltage	$I_F=5\text{A}$			2.3	V

Switching times, Resistive Load

t_{stg}	Storage Time	$I_C=4\text{A}; I_{B1}=1\text{A}; I_{B2}=-2\text{A};$ $V_{CC}=200\text{V}$		1.5		μs
t_f	Fall Time			0.2		μs