

isc Silicon NPN Power Transistor

2SD1848

DESCRIPTION

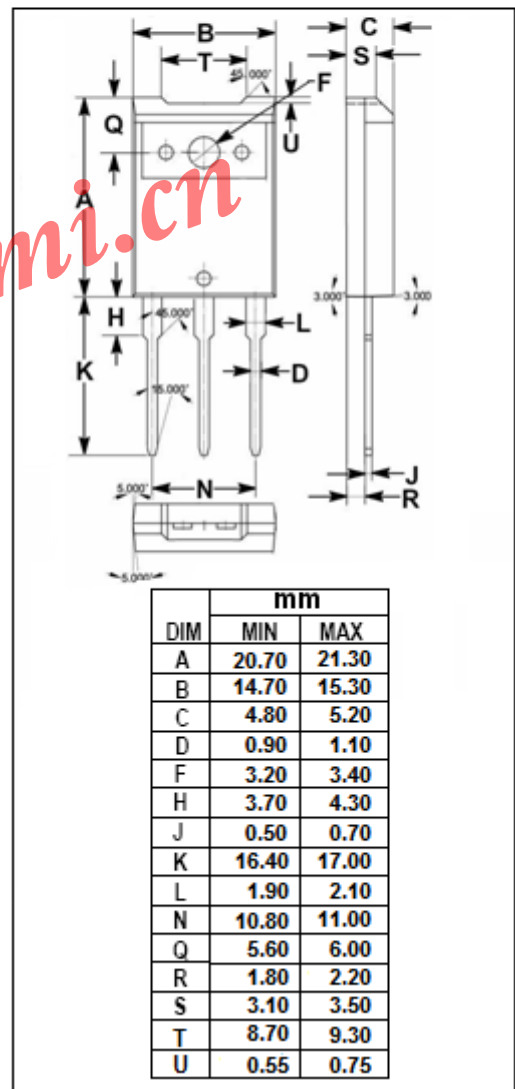
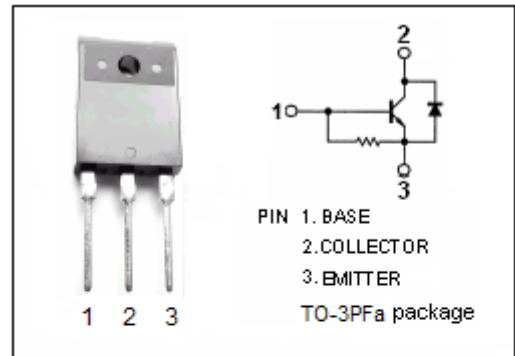
- Collector-Base Breakdown Voltage-  
:  $V_{CBO} = 1500V$  (Min.)
- High Switching Speed
- Built-in Damper Diode

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	6	A
$I_{CM}$	Collector Current-Peak	18	A
$I_B$	Base Current- Continuous	2.5	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	$^{\circ}C$



## isc Silicon NPN Power Transistor

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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	$I_C=5\text{A}; I_B=1.2\text{A}$			8.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1.2\text{A}$			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	$\mu\text{A}$ 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	$I_C=5\text{A}; V_{CE}=10\text{V}$	4.5			
$f_T$	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=10\text{V}$		2		MHz
$V_{ECF}$	C-E Diode Forward Voltage	$I_F=6\text{A}$			2.3	V

Switching times, Resistive Load

$t_{stg}$	Storage Time	$I_C=5\text{A}; I_{B1}=1.2\text{A}; I_{B2}=-2.4\text{A};$ $V_{CC}=200\text{V}$		1.5		$\mu\text{s}$
$t_f$	Fall Time			0.2		$\mu\text{s}$