

isc Silicon NPN Power Transistor

2SD1731

DESCRIPTION

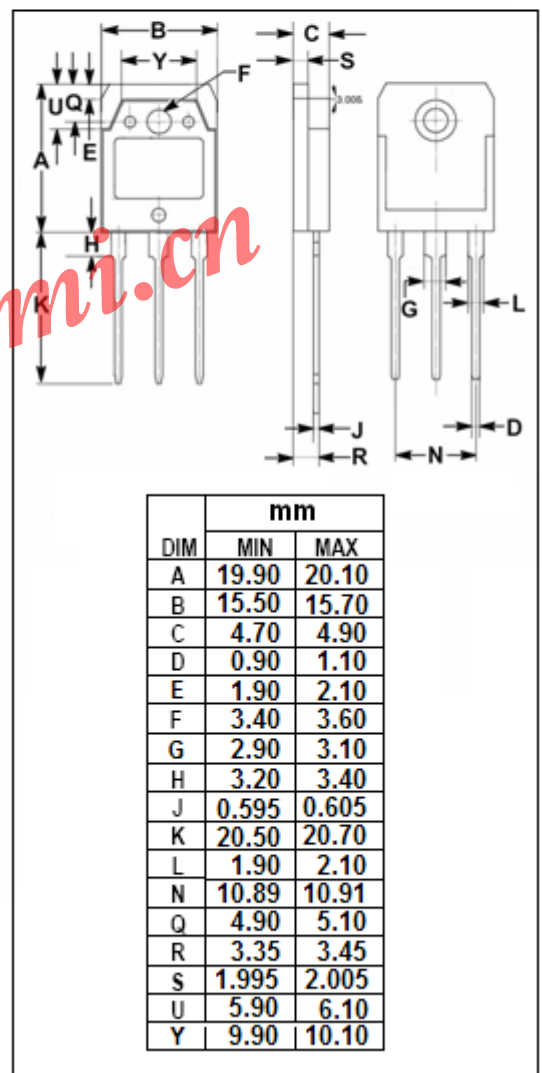
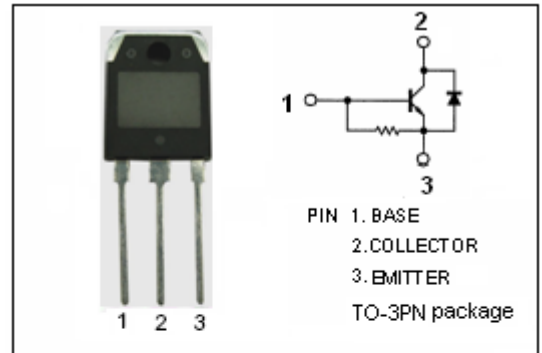
- High Voltage
- High Switching Speed
- Built-in damper diode
- Wide Area of Safe Operation

APPLICATIONS

- Designed for horizontal deflection output applications.

ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	1500	V
V <sub>CES</sub>	Collector-Emitter Voltage	1500	V
V <sub>CEO</sub>	Collector-Emitter Voltage	700	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
I <sub>C</sub>	Collector Current-Continuous	6	A
I <sub>CP</sub>	Collector Current-Peak	18	A
I <sub>B</sub>	Base Current- Continuous	2.5	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	100	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55-150	°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	$I_C=5\text{A}; I_B=1\text{A}$			8.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1.2\text{A}$			1.5	V
$h_{FE}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	5		25	
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=750\text{V}; I_E=0$			10	$\mu\text{A}$
		$V_{CB}=1500\text{V}; I_E=0$			1.0	mA
$V_{ECF}$	C-E Diode Forward Voltage	$I_F=6\text{A}$			2.3	V
$f_T$	Transition Frequency	$I_C=1\text{A}; V_{CE}=10\text{V}$		2		MHz

Switching Times, Resistive Load

$t_s$	Storage Time	$I_C=5\text{A}; I_{B1}=1\text{A}; I_{B2}=-2\text{A},$ $V_{CC}=200\text{V}$		1.5		$\mu\text{s}$
$t_f$	Fall Time			0.2		$\mu\text{s}$