

## isc Silicon NPN Power Transistor

2SD1427

## DESCRIPTION

- High Breakdown Voltage
- High Switching Speed
- Built-in damper diode
- Low Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

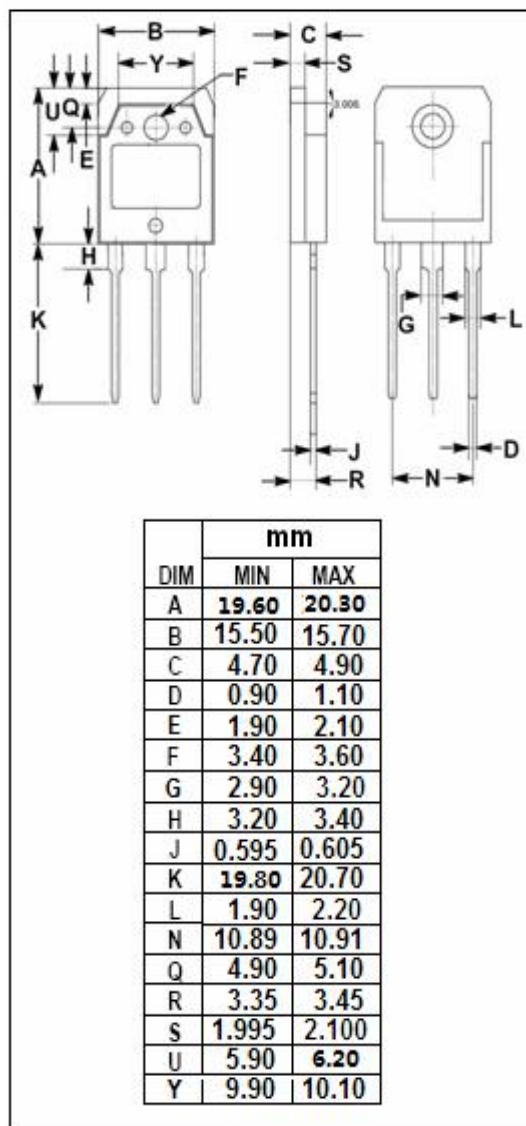
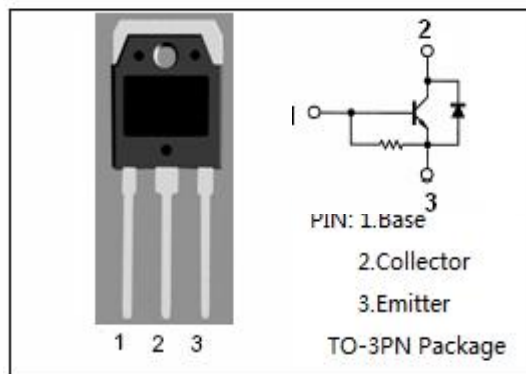
- Designed for use in large screen color deflection circuits.

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

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	5	A
$I_B$	Base Current-Continuous	2.5	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	80	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55-150	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.56	$^\circ\text{C/W}$



**isc Silicon NPN Power Transistor****2SD1427****ELECTRICAL CHARACTERISTICS****T<sub>c</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 200mA; I <sub>C</sub> = 0	5			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 0.8A			5.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 0.8A			1.5	V
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 5V	8			
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 500V; I <sub>E</sub> = 0			10	μ A
f <sub>T</sub>	Transition Frequency	I <sub>C</sub> = 0.1A; V <sub>CE</sub> = 10V; f= 1MHz		3		MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1MHz		165		pF
V <sub>ECF</sub>	C-E Diode Forward Voltage	I <sub>F</sub> = 5A			2.0	V
t <sub>f</sub>	Fall Time	I <sub>C</sub> = 4A; I <sub>B1</sub> = 0.8A			1.0	μ s

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