

## **isc Silicon NPN Power Transistor**

# 2SD1652

### DESCRIPTION

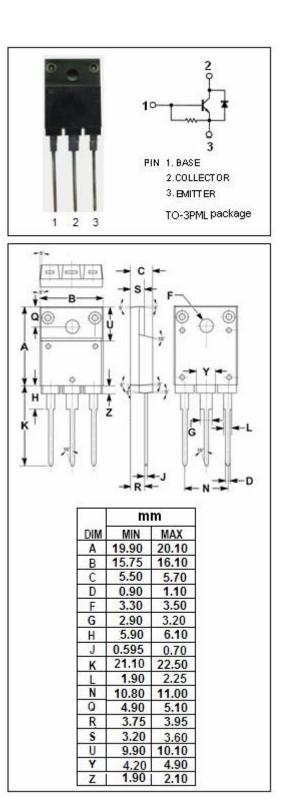
- High Breakdown Voltage-
  - : V<sub>CBO</sub>= 1500V (Min)
- High Switching Speed
- High Reliability
- Built-in Damper Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

#### **APPLICATIONS**

 Designed for color TV horizontal deflection output applications

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)						
SYMBOL	PARAMETER	VALUE	UNIT			
V <sub>CBO</sub>	Collector-Base Voltage	1500	V			
V <sub>CEO</sub>	Collector-Emitter Voltage	800	V			
V <sub>EBO</sub>	Emitter-Base Voltage	6	V			
Ι <sub>C</sub>	Collector Current- Continuous	6	A			
Іср	Collector Current-Peak	16	A			
Pc	Collector Power Dissipation @ Tc=25°C	60	W			
TJ	Junction Temperature	150	°C			
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C			

## ABSOLUTE MAXIMUM RATINGS(Ta=25 °C



isc website: <u>www.iscsemi.com</u>



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## ELECTRICAL CHARACTERISTICS

#### $T_{c}\text{=}25^{\circ}\!\!\!\mathrm{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	мах	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA; R <sub>BE</sub> = ∞	800			V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 1mA; I <sub>E</sub> = 0	1500			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 200mA; I <sub>C</sub> = 0	7			V
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 5A; I <sub>B</sub> = 1A			5.0	V
V <sub>BE</sub> (sat)	Base-Emitter Saturation Voltage	I <sub>C</sub> = 5А; I <sub>B</sub> =01			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 800V ; I <sub>E</sub> = 0			10	μ Α
І <sub>ЕВО</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 4V ; I <sub>C</sub> = 0	40		130	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 5V	8			
V <sub>ECF</sub>	C-E Diode Forward Voltage	I <sub>F</sub> = 6A			2.0	V
t <sub>f</sub>	Fall Time	I <sub>C</sub> = 5A , I <sub>B1</sub> = 1A ; I <sub>B2</sub> = 2A R <sub>L</sub> = 40 Ω ; V <sub>CC</sub> = 200V			0.4	μs

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