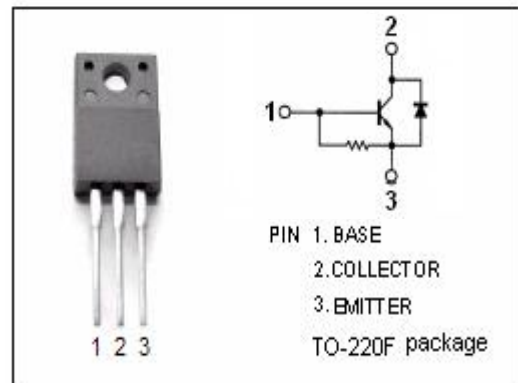


**isc Silicon NPN Power Transistor**
**2SD1404**
**DESCRIPTION**

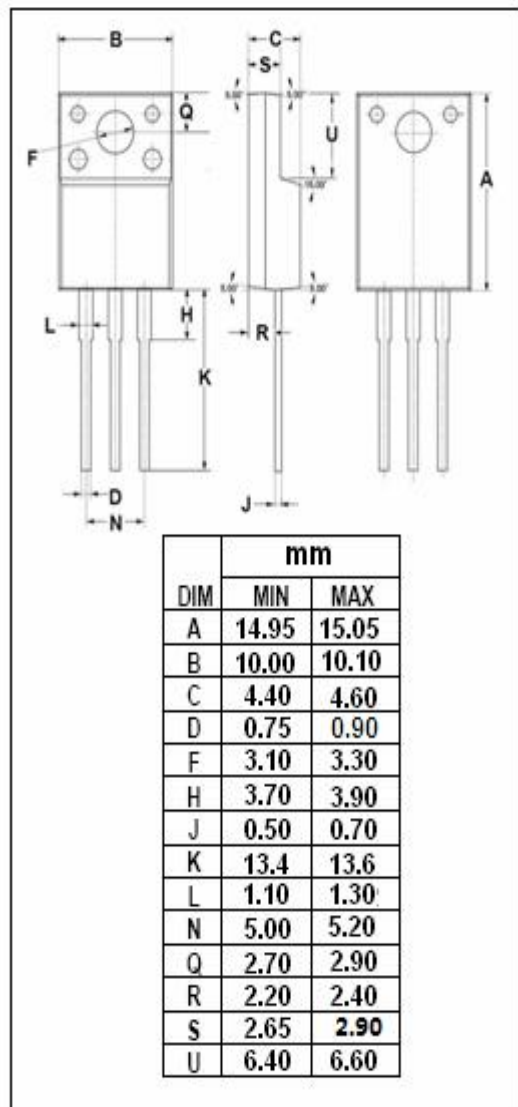
- High Collector Current Capability
- High Collector Power Dissipation Capability
- Built-in Damper Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- B/W TV horizontal deflection output applications.
- High voltage switching applications.


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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CB0</sub>	Collector-Base Voltage	300	V
V <sub>CEO</sub>	Collector-Emitter Voltage	150	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current-Continuous	7	A
I <sub>CM</sub>	Collector Current-Peak	15	A
I <sub>B</sub>	Base Current-Continuous	2	A
P <sub>C</sub>	Collector Power Dissipation T <sub>a</sub> =25°C	2	W
	Collector Power Dissipation T <sub>c</sub> =25°C	40	
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C



**isc Silicon NPN Power Transistor****2SD1404****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}$ ; $L=50\text{mH}$	150			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}$ ; $I_E=0$	300			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=0.1\text{mA}$ ; $I_C=0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}$ ; $I_B=0.5\text{A}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}$ ; $I_B=0.5\text{A}$			1.5	V
$I_{CES}$	Collector Cutoff Current	$V_{CE}=250\text{V}$ ; $V_{BE}=0$			1	mA
$h_{FE}$	DC Current Gain	$I_C=5\text{A}$ ; $V_{CE}=1.5\text{V}$	10			
$f_T$	Current-Gain—Bandwidth Product	$I_C=0.2\text{A}$ ; $V_{CE}=10\text{V}$		18		MHz
$V_{ECF}$	C-E Diode Forward Voltage	$I_F=6\text{A}$			1.8	V
$t_f$	Fall Time	$I_{CP}=5\text{A}$ ; $I_{B1(end)}=0.5\text{A}$			1.0	$\mu\text{s}$

**NOTICE:**

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.