

isc Silicon NPN Power Transistor

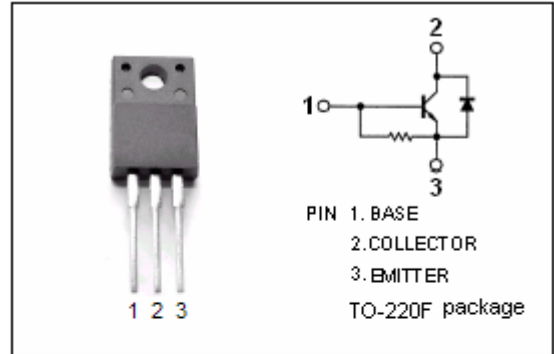
2SD1404

DESCRIPTION

- High Collector Current Capability
- High Collector Power Dissipation Capability
- Built-in Damper Diode

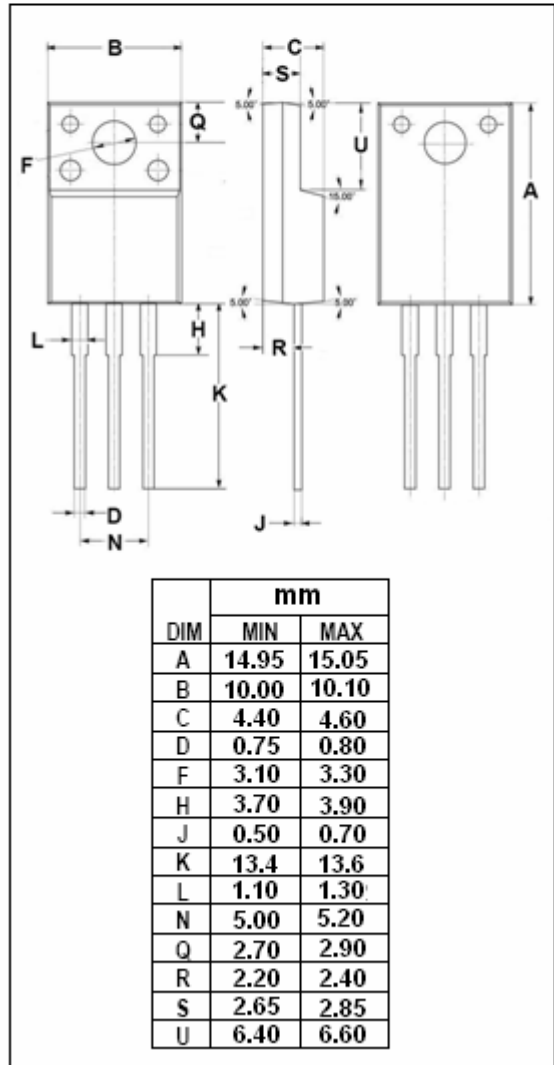
APPLICATIONS

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



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation $T_a=25^{\circ}\text{C}$	2	W
	Collector Power Dissipation $T_c=25^{\circ}\text{C}$	25	
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



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	$I_C= 100\text{mA}$; $L= 50\text{mH}$	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	$I_E= 0.1\text{A}$; $I_C= 0$	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	μs