

isc Silicon NPN Power Transistor

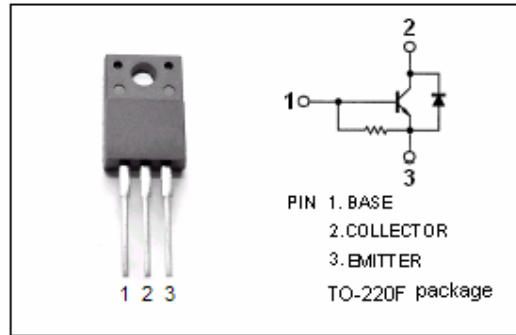
2SD1404

DESCRIPTION

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

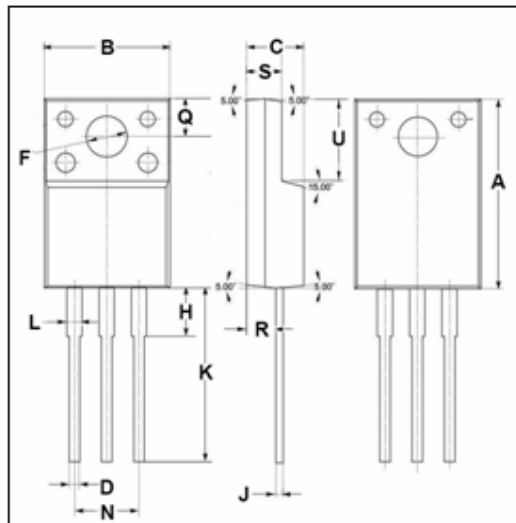
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS(T_a=25°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°C	2	W
	Collector Power Dissipation T _c =25°C	25	
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



DIM	mm	
	MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.80
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.85
U	6.40	6.60

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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