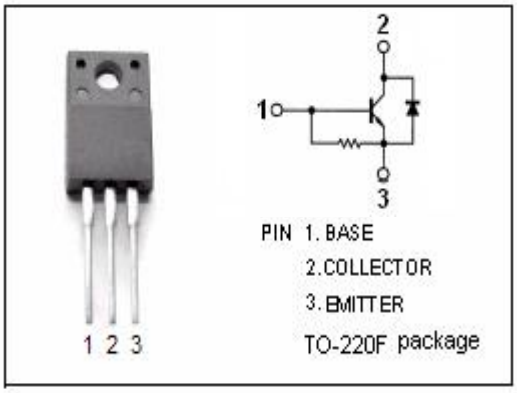
isc Silicon NPN Power Transistor — 2SD1404



DESCRIPTION

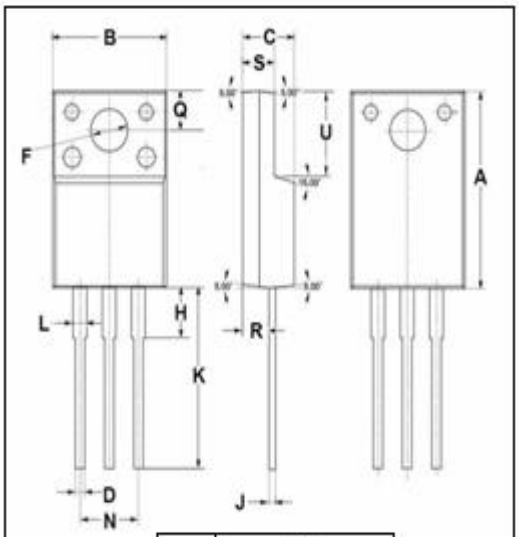
- High Collector Current Capability
- High Collector Power Dissipation Capability
- Built-in Damper Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	2	W
	Collector Power Dissipation T_C=25℃	40	
T_j	Junction Temperature	150	℃
T_{stg}	Storage Ttemperature Range	-55~150	℃



DIM	mm MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
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	2.90
U	6.40	6.60

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

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