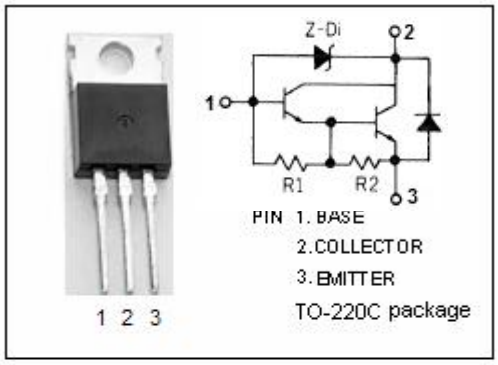
isc Silicon NPN Darlington Power Transistor 2SD1394

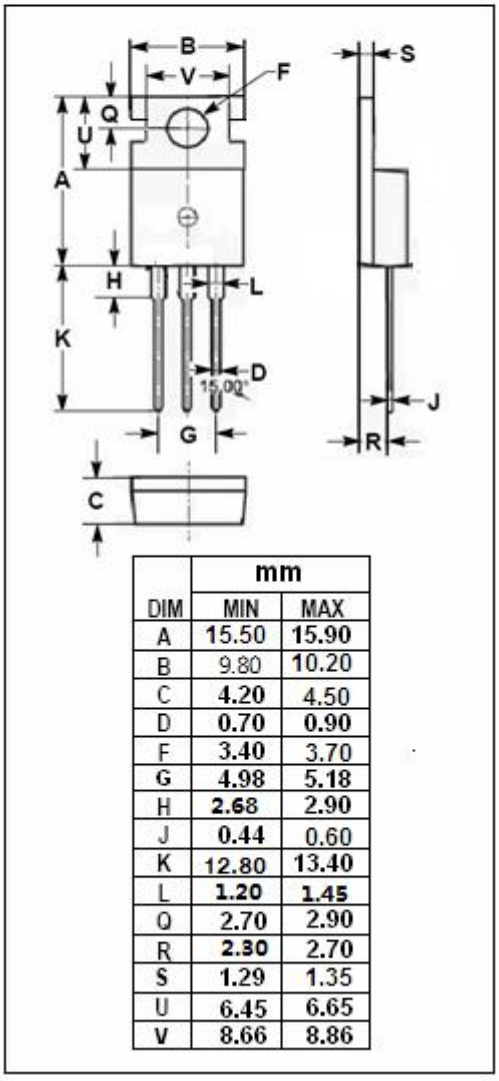
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 50V(Min)
- High DC Current Gain
  : h_{FE}= 2000(Min) @I_C= 1.5A
- Low Saturation Voltage
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed for general purpose amplifier and low speed switching applications.



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	3	A
I_{CP}	Collector Current-Peak	5	A
P_C	Collector Power Dissipation @ T_C=25℃	30	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 10mA, I_B= 0	50			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 1.5A, I_B= 3mA			1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 3A ,I_B= 6mA			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 1.5A; V_{CE}= 3V			2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 50V, I_E= 0			0.1	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 50V, I_B= 0			1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			3.0	mA
h_{FE-1}	DC Current Gain	I_C= 1.5A; V_{CE}= 3V	2000		15000	
h_{FE-2}	DC Current Gain	I_C= 3A; V_{CE}= 3V	1000			

Switching Times

t_{on}	Turn-on Time	I_C= 1.5A; I_{B1}= I_{B2}= 3mA		0.5		μ s
t_s	Storage Time			4.0		μ s
t_f	Fall Time			1.5		μ s