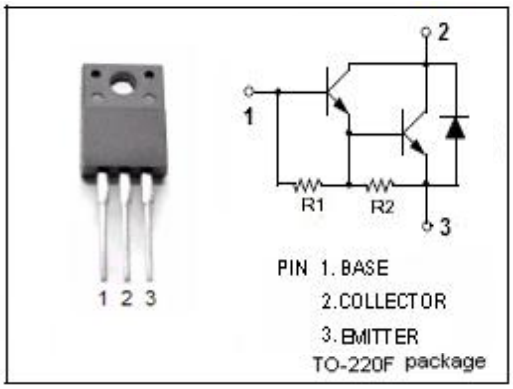
isc Silicon NPN Darlington Power Transistor 2SD2163

DESCRIPTION

- High DC Current Gain-
  : h_{FE} = 1000(Min)@ I_C= 10A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 100V(Min)
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

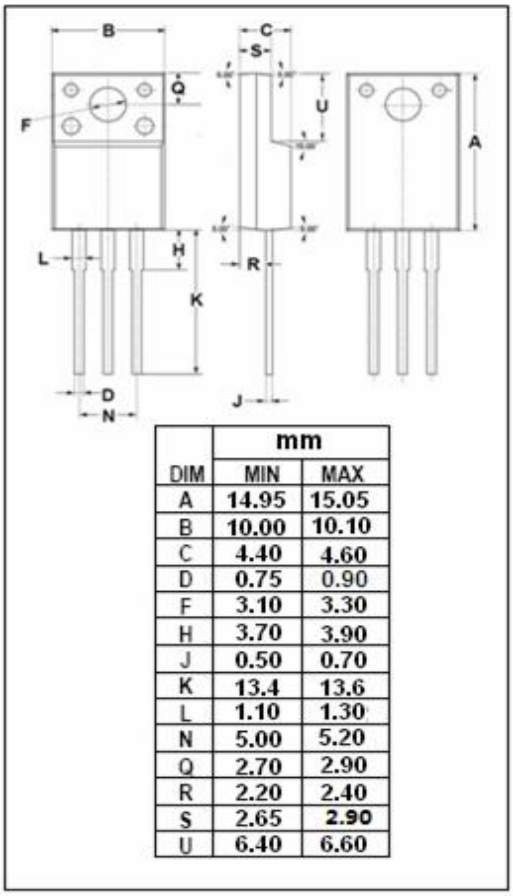
APPLICATIONS

- Be ideal for direct driving from the IC output of devices such as pulse motor drivers and relay drivers of PC terminals.



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current- Continuous	1	A
P_C	Collector Power Dissipation	30	W
T_j	Max.Junction Temperature	150	℃
T_{stg}	Storage Temperature 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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	4.2	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W

isc Silicon NPN Darlington Power Transistor 2SD2163

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 10mA, I_B= 0	100		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 10A ,I_B= 25mA		1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 10A ,I_B= 25mA		2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}=100V, I_E= 0		10	μA
h_{FE}	DC Current Gain	I_C= 10A ; V_{CE}= 2V	1000	30000	

◆ **h_{FE} Classifications**

M	L	K	J
1000-3000	2000-5000	4000-10000	8000-30000