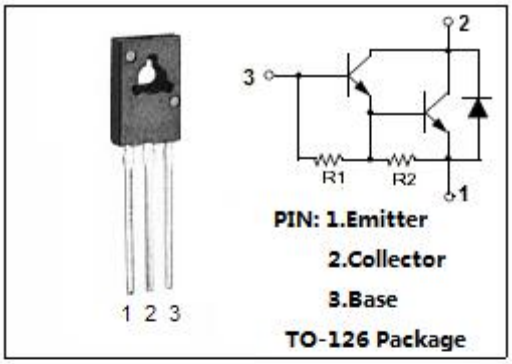
isc Silicon NPN Darlington Power Transistor ISCE1856

DESCRIPTION

- High DC Current Gain-
  : h_{FE} = 1000(Min)@ I_C= 1A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 100V(Min)
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$ = 2.5V(Max)@ I_C= 2A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

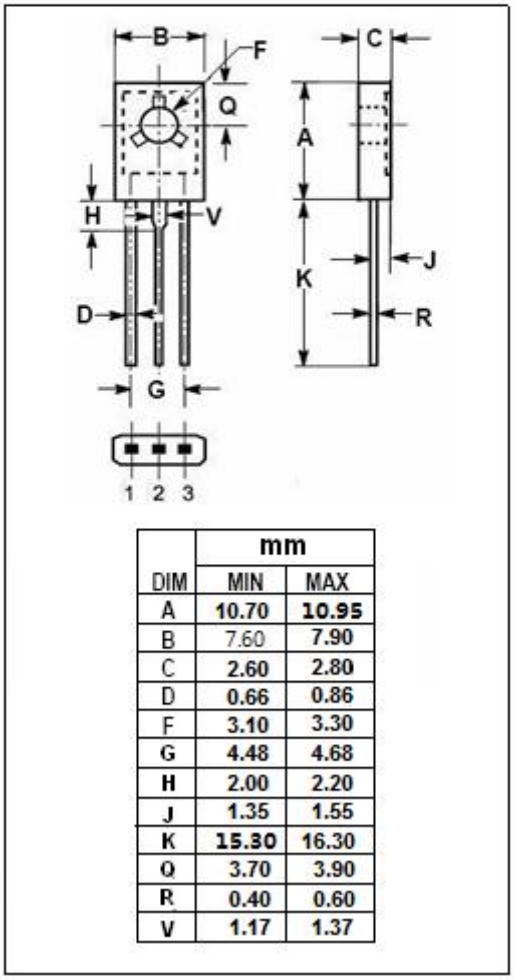


ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Collector Current-Peak	4	A
I_B	Base Current	50	mA
P_C	Collector Power Dissipation T_C=25℃	20	W
	Collector Power Dissipation T_a=25℃	2	
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W



DIM	mm MIN	MAX
A	10.70	10.95
B	7.60	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	15.30	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

isc Silicon NPN Darlington Power Transistor ISCE1856

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA, I_B= 0	100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A, I_B= 8mA			2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 2A; V_{CE}= 4V			2.8	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 100V, I_E= 0			1.0	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 50V, I_B= 0			2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			2.0	mA
h_{FE-1}	DC Current Gain	I_C= 1A; V_{CE}= 4V	1000			
h_{FE-2}	DC Current Gain	I_C= 2A; V_{CE}= 4V	500			