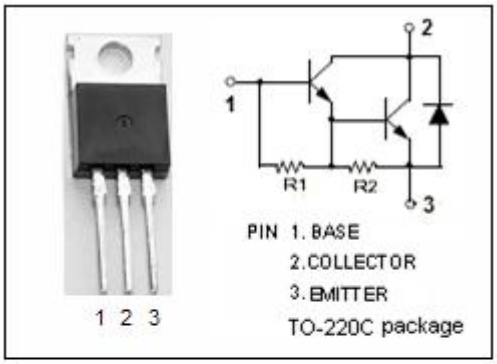
isc Silicon NPN Darlington Power Transistor 2SC1881K

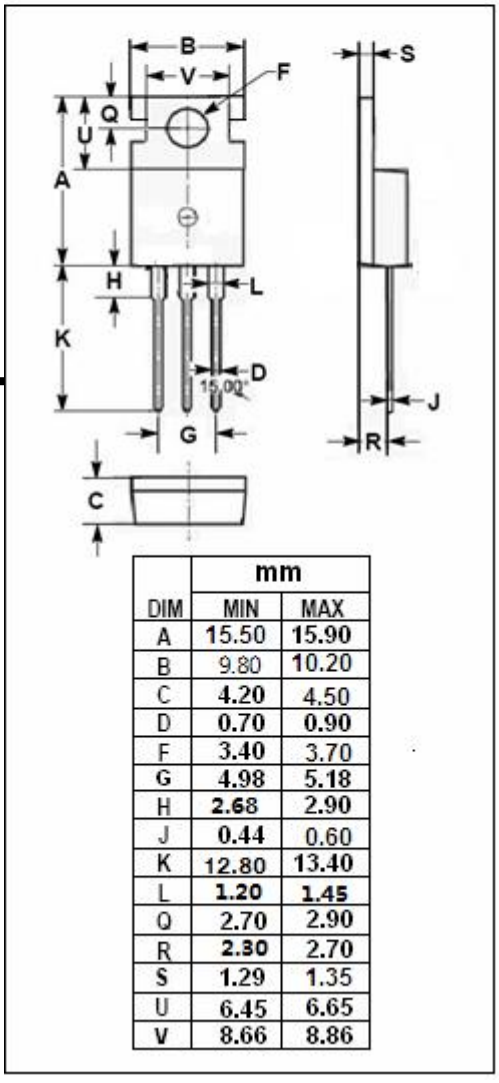
DESCRIPTION

- High DC Current Gain-
  : h_{FE} = 1000(Min)@ I_C= 1.5A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 60V(Min)
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$ = 1.2V(Max)@ I_C= 2.5A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed for High gain amplifier power 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	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	6	A
P_C	Collector Power Dissipation T_C=25℃	30	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 50mA, I_B= 0	60			V
$V_{(BR)EBO}$	Emitter –Base Breakdown Voltage	I_C= 50mA, I_B= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2.5A ,I_B= 20mA			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 60V, I_E= 0			0.2	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 30V, I_B= 0			0.4	mA
h_{FE-1}	DC Current Gain	I_C= 1.5A ; V_{CE}= 1.5V	1000			
h_{FE-2}	DC Current Gain	I_C= 2.5A ; V_{CE}= 1.5V	500			
Switching Times						
Ton	Turn on time	V_{CC} = 11 V, I_C = 2 A, I_{B1} = –I_{B2} = 8 mA		1		μs
Toff	Turn off time			5		μs

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