

isc Silicon NPN Darlington Power Transistor

2SC1881

DESCRIPTION

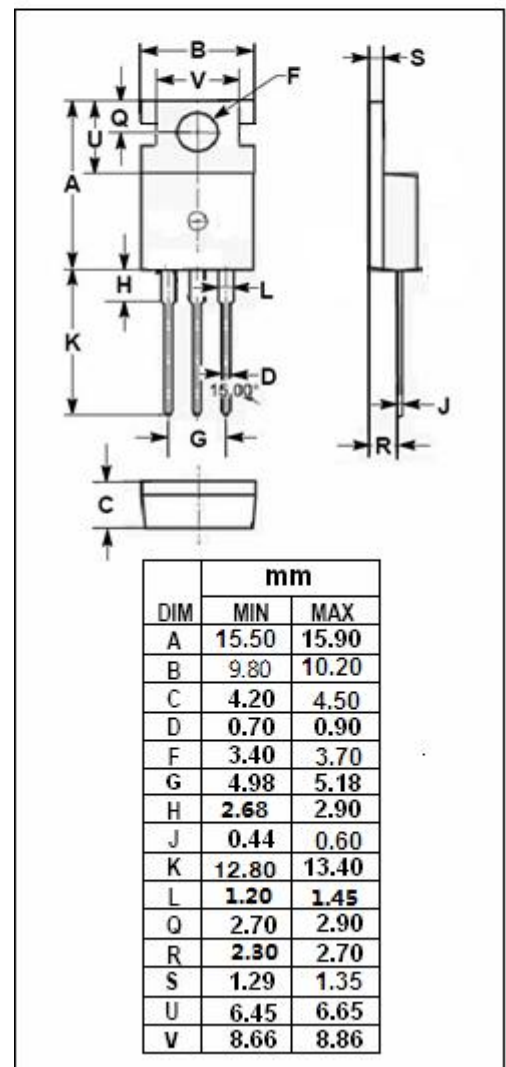
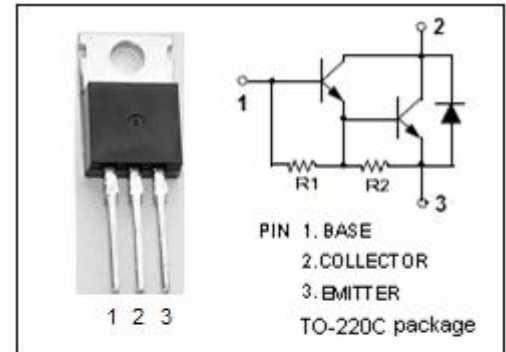
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = 1.5\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = 60\text{V}(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = 1.2\text{V}(\text{Max}) @ I_C = 2.5\text{A}$
- Minimum Lot-to-Lot variations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

APPLICATIONS

- Designed for High gain amplifier power switching applications.

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

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 $T_C = 25^\circ\text{C}$	30	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SC1881****ELECTRICAL CHARACTERISTICS****T_C=25°C 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

T _{on}	Turn on time	V _{CC} = 11 V, I _C = 2 A, I _{B1} = -I _{B2} = 8 mA		1		μ s
T _{off}	Turn off time			5		μ s

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