

isc Silicon NPN Darlington Power Transistor

2SC1881K

DESCRIPTION

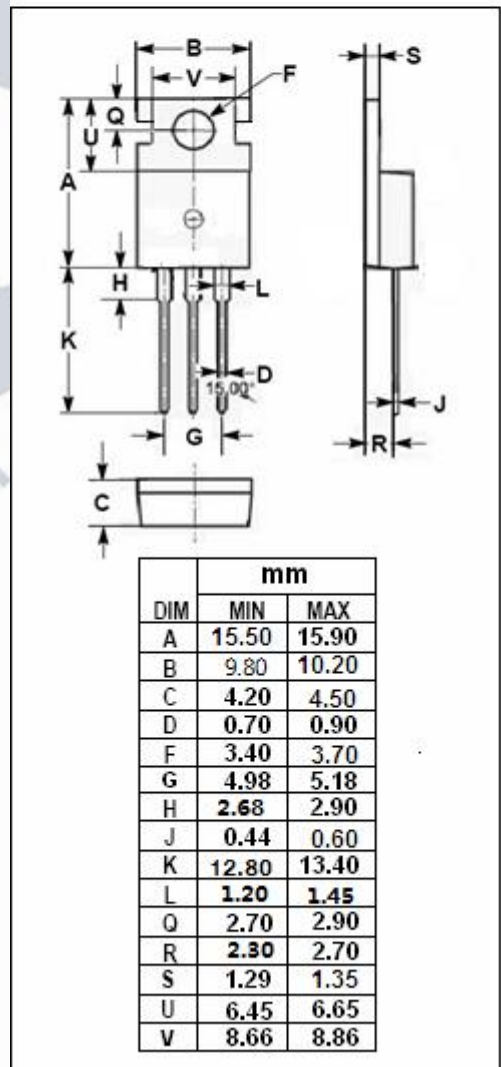
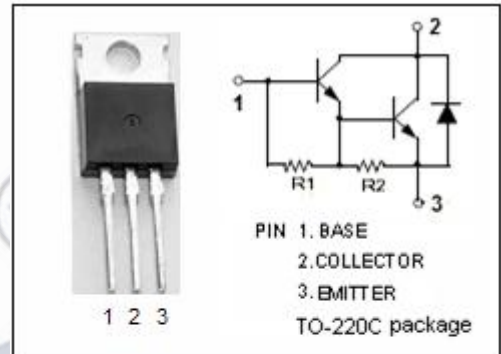
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = 1.5\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = 60\text{V}(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = 1.2\text{V}(\text{Max}) @ I_C = 2.5\text{A}$

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**2SC1881K****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 50\text{mA}, I_B = 0$	60			V
$V_{(BR)EBO}$	Emitter -Base Breakdown Voltage	$I_C = 50\text{mA}, I_B = 0$	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 2.5\text{A}, I_B = 20\text{mA}$			1.2	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 60\text{V}, I_E = 0$			0.2	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = 30\text{V}, I_B = 0$			0.4	mA
h_{FE-1}	DC Current Gain	$I_C = 1.5\text{A}; V_{CE} = 1.5\text{V}$	1000			
h_{FE-2}	DC Current Gain	$I_C = 2.5\text{A}; V_{CE} = 1.5\text{V}$	500			

Switching Times

T_{on}	Turn on time	$V_{CC} = 11\text{V}, I_C = 2\text{A}, I_{B1} = -I_{B2} = 8\text{mA}$		1		μs
T_{off}	Turn off time			5		μs