

isc Silicon NPN Darlington Power Transistor

2SD1983

DESCRIPTION

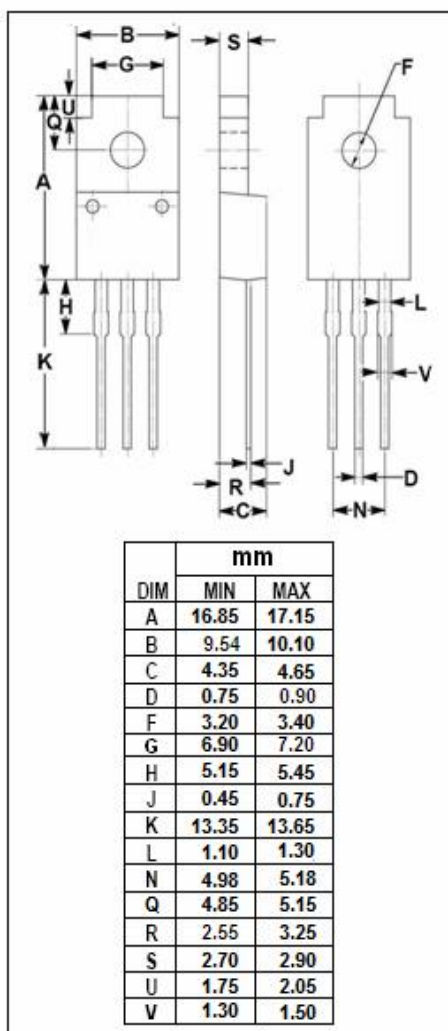
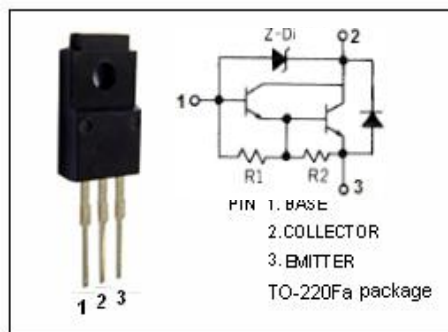
- High DC Current Gain
: $h_{FE} = 4000(\text{Min}) @ I_C = 1A$
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 1.5V(\text{Max.}) @ I_C = 1A$
- Incorporating a built-in zener diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- For low-frequency amplification

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50-70	V
V_{CEO}	Collector-Emitter Voltage	50-70	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	1.5	A
I_{CP}	Collector Current-Peak	2.5	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	20	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD1983****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 = 1mA; I _B = 0	50		70	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C =0.1mA; I _E = 0	50		70	V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 1mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1A; I _B = 1mA			2.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			3.0	mA
h _{FE}	DC Current Gain	I _C = 1A; V _{CE} = 2V	4000		40000	
f _T	Current-Gain—Bandwidth Product	I _C = 10mA; V _{CE} = 10V	100			MHz

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