

isc Silicon NPN Darlington Power Transistor
2SD2081
DESCRIPTION

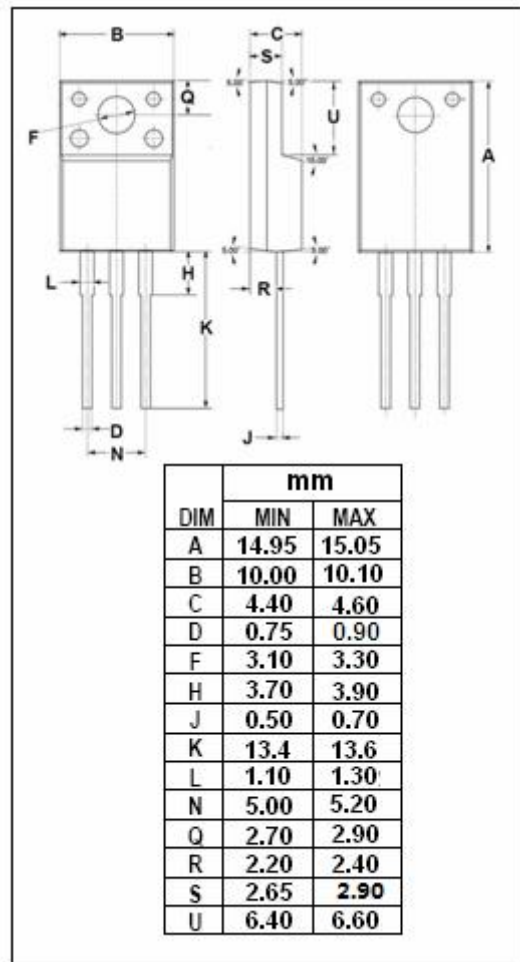
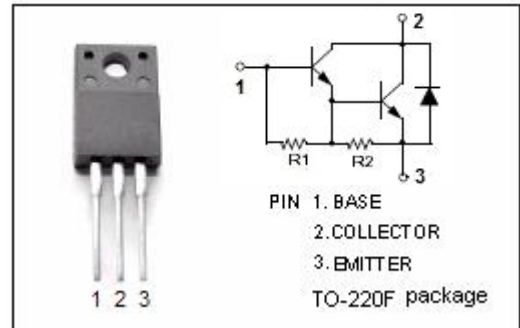
- High DC Current Gain-
: $h_{FE} = 2000(\text{Min})@ (V_{CE} = 4V, I_C = 5A)$
- Large Current Capability
- Complement to Type 2SB1259
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Driver for solenoid, motor and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Pulse	15	A
I_B	Base Current-Continuous	1	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	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	120			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 5mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 5mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 120V; I _E = 0			10	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			10	mA
h _{FE}	DC Current Gain	I _C = 5A; V _{CE} = 4V	2000			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz		95		pF
f _T	Current-Gain—Bandwidth Product	I _E = -0.5A; V _{CE} = 12V		60		MHz

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