

isc Silicon PNP Darlington Power Transistor

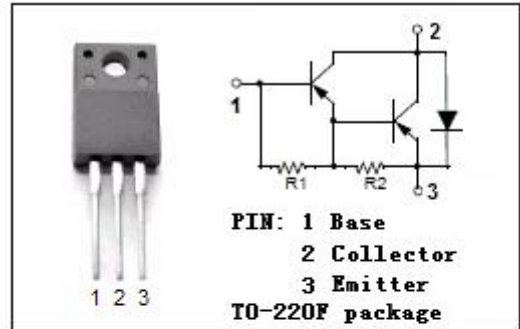
2SB1351

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -60V(\text{Min})$
- High DC Current Gain-
: $h_{FE} = 2000(\text{Min}) @ I_C = -10A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

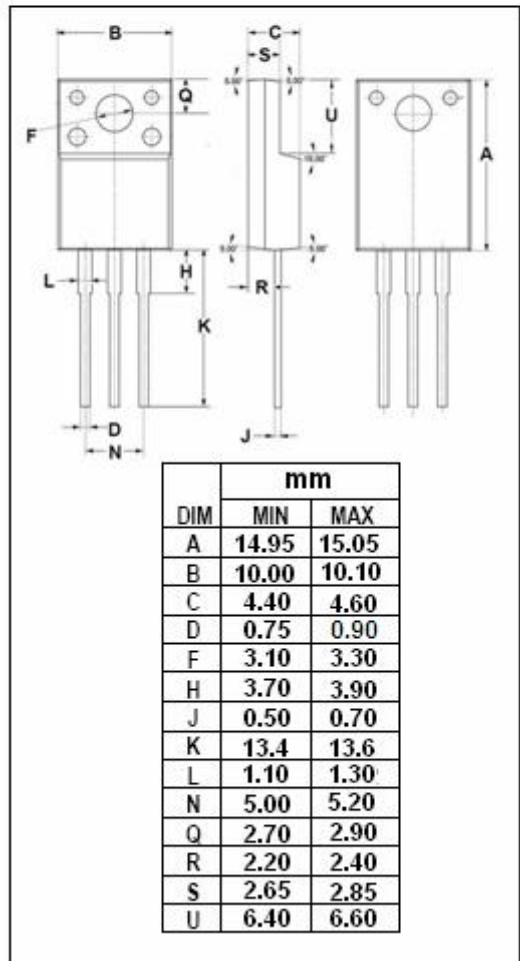
APPLICATIONS

- Driver for printer head solenoid, relay and motor and general purpose applications.



ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	-60	V
V _{CEO}	Collector-Emitter Voltage	-60	V
V _{EBO}	Emitter-Base Voltage	-6	V
I _C	Collector Current-Continuous	-12	A
I _{CP}	Collector Current-Pulse	-20	A
I _B	Base Current-Continuous	-1	A
P _C	Collector Power Dissipation @ T _C =25°C	30	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



isc Silicon PNP Darlington Power Transistor**2SB1351****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	$I_C = -10\text{mA}; I_B = 0$	-60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{A}; I_B = -20\text{mA}$			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -10\text{A}; I_B = -20\text{mA}$			-2.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -60\text{V}; I_E = 0$			-10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -6\text{V}; I_C = 0$			-10	mA
h_{FE}	DC Current Gain	$I_C = -10\text{A}; V_{CE} = -4\text{V}$	2000			
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}; f_{test} = 1.0\text{MHz}$		170		pF
f_T	Current-Gain—Bandwidth Product	$I_E = 1\text{A}; V_{CE} = -12\text{V}$		130		MHz

Switching Times

t_{on}	Turn-on Time	$I_C = -10\text{A}; I_{B1} = -I_{B2} = -20\text{mA}, V_{CC} = -40\text{V}, R_L = 4\ \Omega$		0.7		μs
t_{stg}	Storage Time			1.5		μs
t_f	Fall Time			0.6		μs