

isc Silicon NPN Darlington Power Transistor

2SD1026

DESCRIPTION

- High DC Current Gain
: $h_{FE} = 1500(\text{Min.}) @ I_C = 10A, V_{CE} = 3V$
- High Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = 100V(\text{Min})$

APPLICATIONS

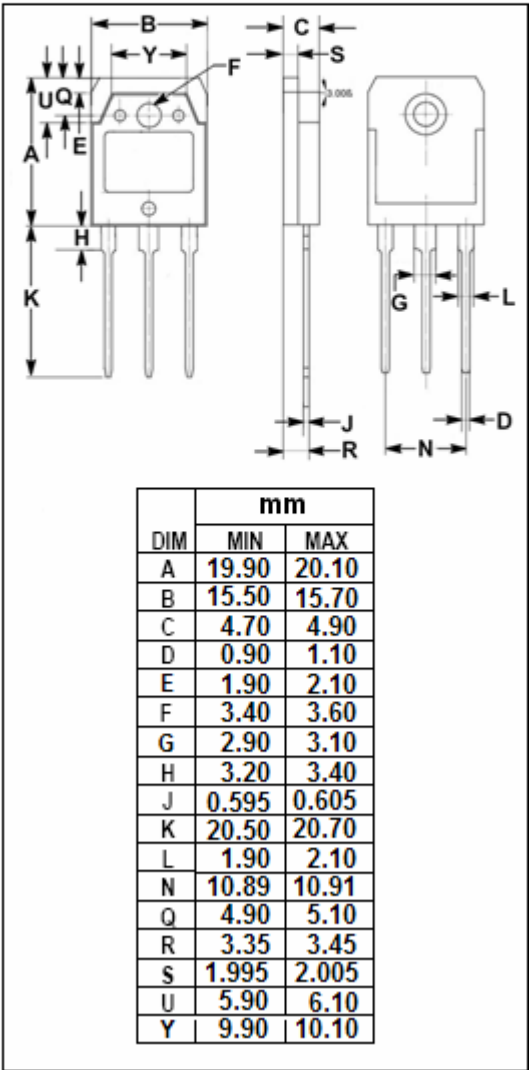
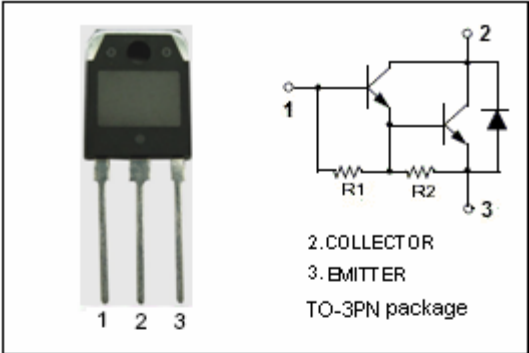
- Designed for general purpose amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	22	A
I_B	Base Current- Continuous	1	A
I_{BM}	Base Current- Peak	2	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	100	W
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^{\circ}\text{C/W}$



isc Silicon NPN Darlington Power Transistor**2SD1026****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = 0.1\text{A}, I_B = 0$	100			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	$V_{CB} = 100\text{V}, I_E = 0$			0.1	mA
I_{CEO}	Collector Cutoff current	$V_{CE} = 100\text{V}, I_B = 0$			0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 7\text{V}, I_C = 0$			5	mA
f_T	Current-Gain—Bandwidth Product	$I_C = 1.5\text{A}; V_{CE} = 10\text{V}$		20		MHz
h_{FE}	DC Current Gain	$I_C = 10\text{A}; V_{CE} = 3\text{V}$	1500			

Switching Times

t_{on}	Turn-On Time	$I_C = 15\text{A}, I_{B1} = -I_{B2} = 20\text{mA};$ $R_L = 2\Omega; V_{BB2} = 4\text{V}$			2.0	μs
t_{stg}	Storage Time				5.0	μs
t_f	Fall Time				3.0	μs