

isc Silicon NPN Darlington Power Transistor

2SD1662

DESCRIPTION

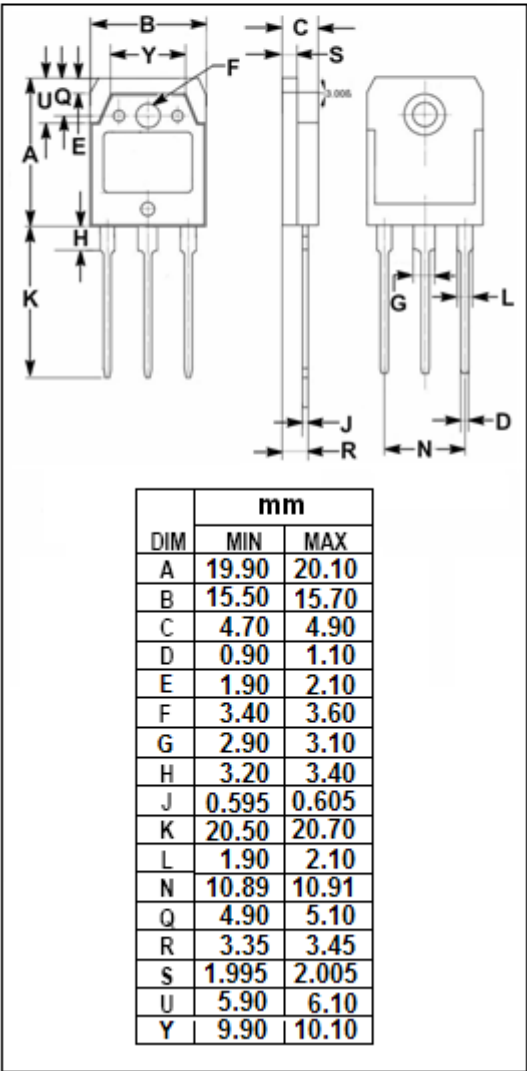
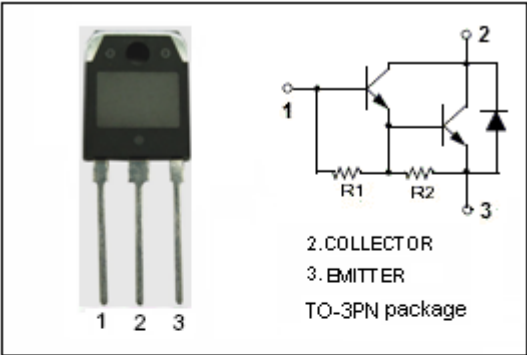
- High DC Current Gain
: $h_{FE} = 1000(\text{Min.}) @ I_C = 15A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 100V(\text{Min.})$
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 1.5V(\text{Max.}) @ I_C = 15A$

APPLICATIONS

- Designed for high current switching application.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	15	A
I_B	Base Current- Continuous	1	A
P_C	Collector Power Dissipation @ $T_C = 25^{\circ}C$	100	W
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$



isc Silicon NPN Darlington Power Transistor**2SD1662****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	$I_C= 50\text{mA}$, $I_B= 0$	100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 15\text{A}$, $I_B= 25\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 15\text{A}$, $I_B= 25\text{mA}$			2.2	V
I_{CBO}	Collector Cutoff current	$V_{CB}= 100\text{V}$, $I_E= 0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}$; $I_C= 0$			10	mA
h_{FE}	DC Current Gain	$I_C= 15\text{A}$; $V_{CE}= 3\text{V}$	1000			
C_{OB}	Output Capacitance	$I_E= 0$; $V_{CB}= 10\text{V}$; $f_{test}= 1.0\text{MHz}$		280		pF
f_T	Current-Gain—Bandwidth Product	$I_C= 1\text{A}$; $V_{CE}= 5\text{V}$		14		MHz

Switching Times

t_{on}	Turn-On Time	$I_{B1} = -I_{B2}= 10\text{mA}$; $R_L= 10\Omega$; $V_{CC}= 50\text{V}$		1.0		μs
t_{stg}	Storage Time			2.0		μs
t_f	Fall Time			1.5		μs