

**isc Silicon NPN Darlington Power Transistor**

**2SD1662**

**DESCRIPTION**

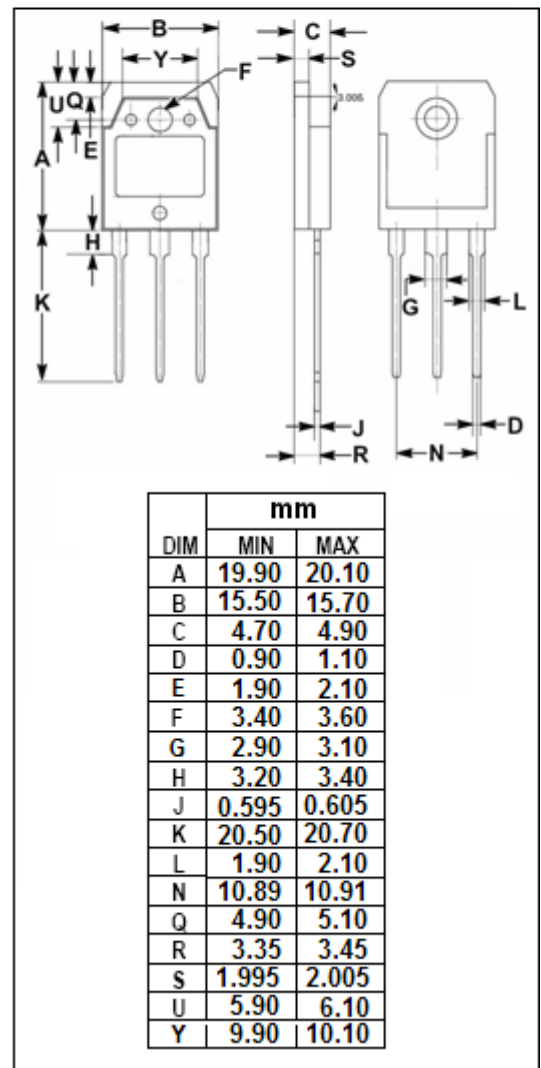
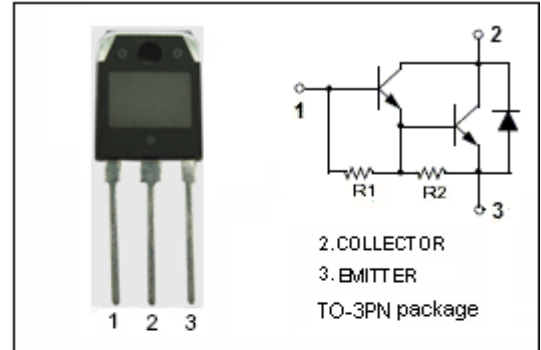
- High DC Current Gain  
:  $h_{FE} = 1000(\text{Min.}) @ I_C = 15A$
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 100V(\text{Min.})$
- Low Collector Saturation Voltage  
:  $V_{CE(sat)} = 1.5V(\text{Max.}) @ I_C = 15A$

**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	$\mu\text{A}$
$I_{EBO}$	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		$\mu\text{s}$
$t_{stg}$	Storage Time			2.0		$\mu\text{s}$
$t_f$	Fall Time			1.5		$\mu\text{s}$