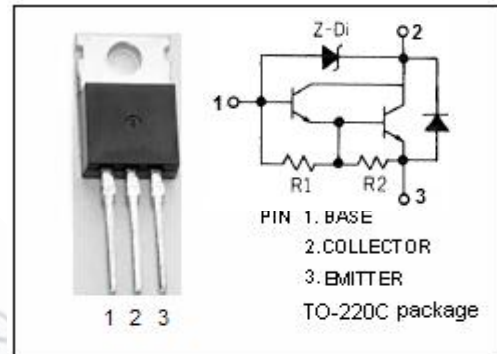


isc Silicon NPN Darlington Power Transistor

2SD1647

DESCRIPTION

- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 1A$
- High DC Current Gain
: $h_{FE} = 1000(\text{Min}) @ I_C = 1.0A$
- Low Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

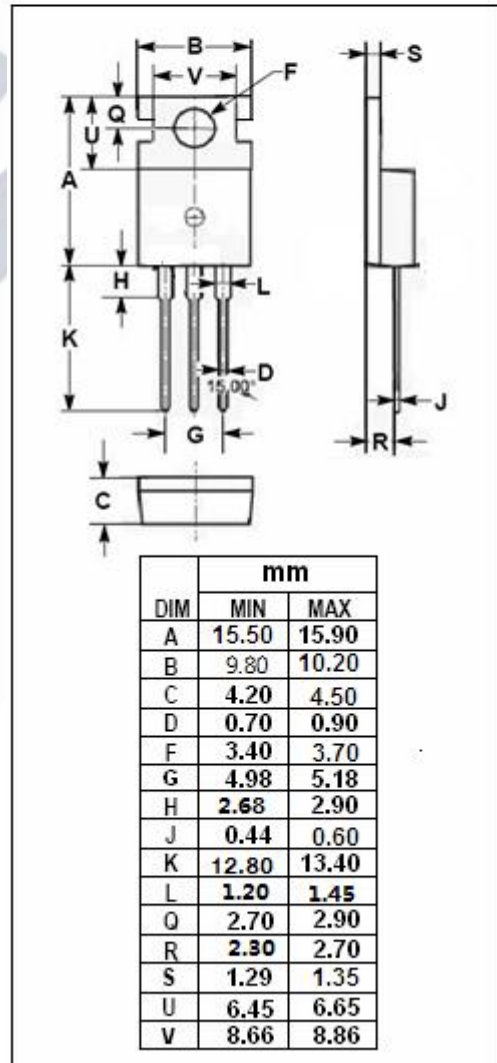


APPLICATIONS

- Designed for general purpose amplifier and low frequency power Amp applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50-70	V
V_{CEO}	Collector-Emitter Voltage	50-70	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	2	A
I_{CP}	Collector Current-Peak	3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	25	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD1647****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	$I_C=5\text{mA}, I_B=0$	50		70	V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=100\mu\text{A}, I_E=0$	50		70	V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}, I_B=1\text{mA}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=50\text{V}, I_E=0$			10	μA
I_{CEO}	Collector Cutoff Current	$V_{CE}=50\text{V}, I_B=0$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}, I_C=0$			3.0	mA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	1000		10000	
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}, f_{test}=1\text{MHz}$		25		pF