



isc Silicon NPN Darlington Power Transistor

2SD1647

DESCRIPTION

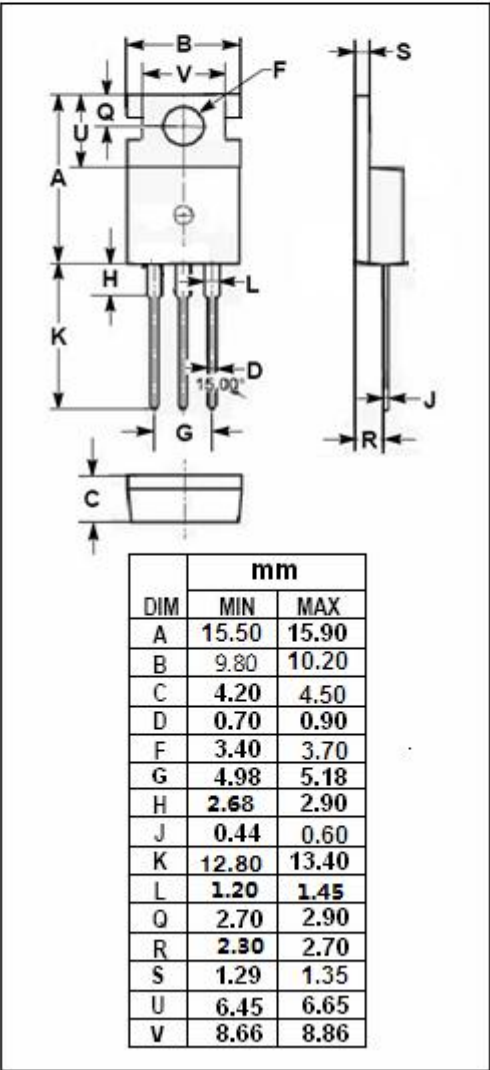
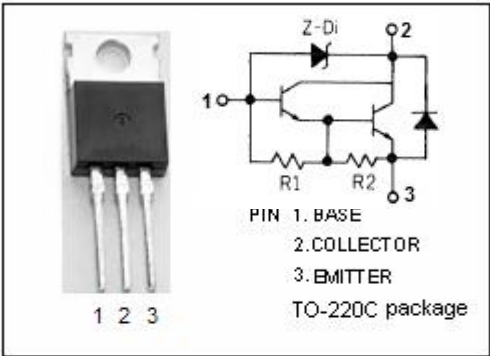
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.5V(Max) @ I_C = 1A$
- High DC Current Gain
: $h_{FE} = 1000(Min) @ I_C = 1.0A$
- Low Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

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

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 @ $T_C=25^{\circ}C$	25	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$



isc Silicon NPN Darlington Power Transistor**2SD1647****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 5mA, I _B = 0	50		70	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 100 μ A, I _E = 0	50		70	V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A, I _B = 1mA			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V, I _E = 0			10	uA
I _{CEO}	Collector Cutoff Current	V _{CE} = 50V, I _B = 0			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			3.0	mA
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} = 2V	1000		10000	
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V, f _{test} = 1MHz		25		pF