

**isc Silicon NPN Darlington Power Transistor**

**2SD1646**

**DESCRIPTION**

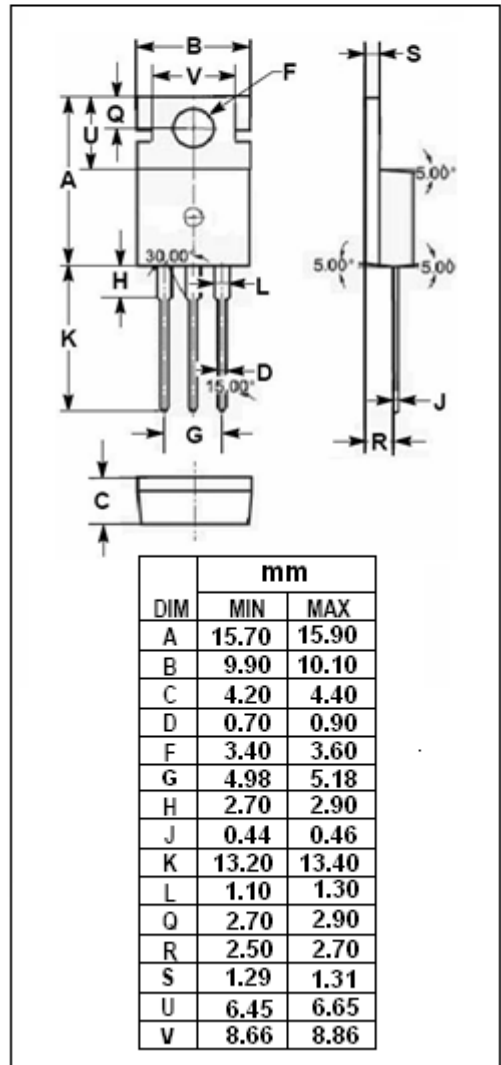
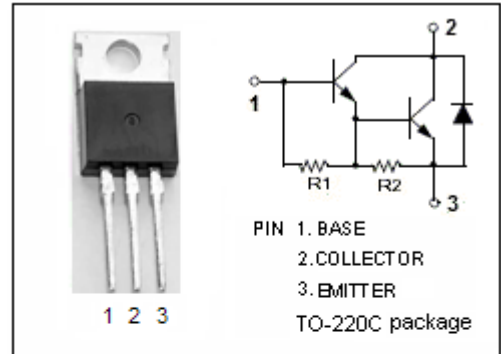
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 100V(\text{Min.})$
- High DC Current Gain  
:  $h_{FE} = 1000(\text{Min}) @ I_C = 1A$
- Low Collector Saturation Voltage

**APPLICATIONS**

- Designed for low frequency power 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	6	V
$I_C$	Collector Current-Continuous	2	A
$I_{CP}$	Collector Current-Peak	3	A
$P_C$	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.5	W
	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	25	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**isc Silicon NPN Darlington Power Transistor****2SD1646****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	$I_C=5\text{mA}; I_B=0$	100			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=50\mu\text{A}; I_E=0$	100			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	$V_{CB}=100\text{V}; I_E=0$			10	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			3	mA
$h_{FE}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	1000		10000	
$C_{OB}$	Collector Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1\text{MHz}$		25		pF