

**isc Silicon NPN Darlington Power Transistor**

**2SD916**

**DESCRIPTION**

- High DC Current Gain
- Low Saturation Voltage
- High Reliability

**APPLICATIONS**

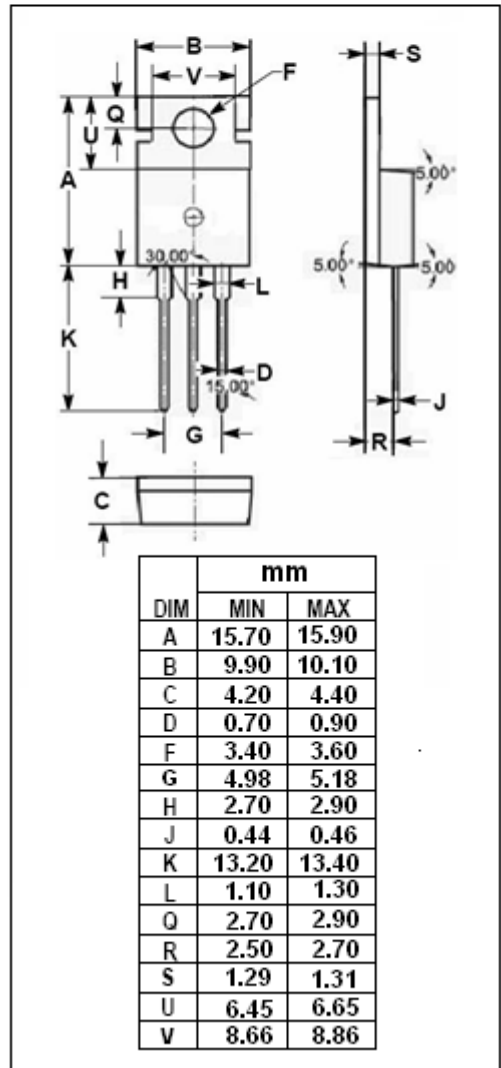
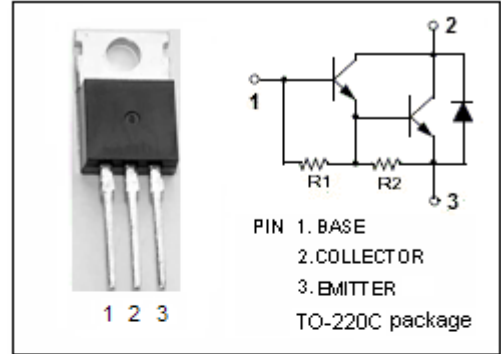
- Audio power amplifiers
- Relay & solenoid drivers
- Motor controls
- General purpose power amplifiers

**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	60	V
V <sub>CEO(SUS)</sub>	Collector-Emitter Voltage	50	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current-Continuous	7	A
I <sub>B</sub>	Base Current-Continuous	0.2	A
P <sub>C</sub>	Collector Power Dissipation @ T <sub>C</sub> =25°C	30	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	4.0	°C/W



**isc Silicon NPN Darlington Power Transistor****2SD916****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	$I_C=0.1\text{mA}; I_B=0$	60			V
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.1\text{A}; I_B=0$	50			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=0.1\text{mA}; I_E=0$	60			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\text{mA}; I_C=0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=7.5\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=7.5\text{mA}$			2.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=60\text{V}; I_E=0$			0.1	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=6\text{V}; I_C=0$			50	mA
$h_{FE}$	DC Current Gain	$I_C=3\text{A}; V_{CE}=1.5\text{V}$	800	4000		