

**isc Silicon PNP Darlington Power Transistor**

**2N6648**

**DESCRIPTION**

- With TO-3 packaging
- Built-in base-emitter shunt resistors
- Very high DC current gain
- Complement to type 2N6648
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

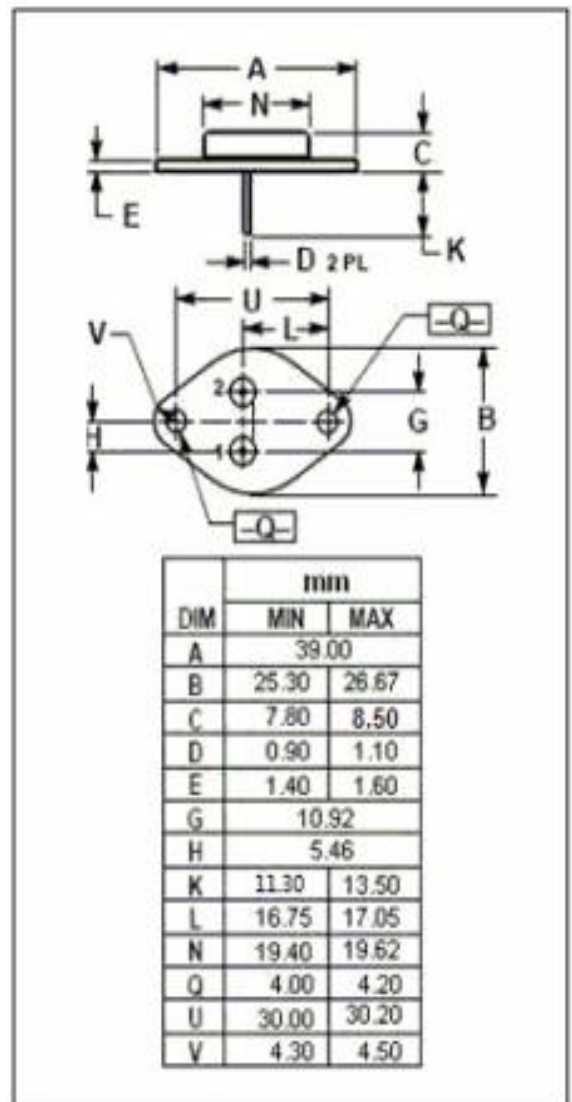
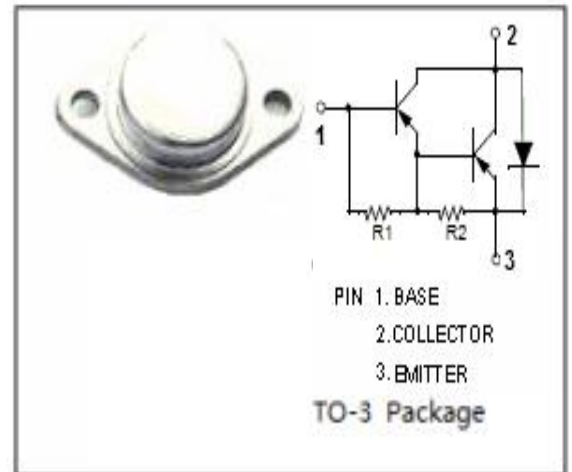
- Electronic ignition
- Alternator regulator
- Motor controls
- Power switching
- Hammer drivers

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	-40	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-40	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-10	A
I <sub>CM</sub>	Collector Current-Peak	-15	A
I <sub>B</sub>	Base Current	-0.25	A
P <sub>C</sub>	Collector Power Dissipation@T <sub>C</sub> =25°C	100	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-65~150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	ThermalResistance, Junction to Case	1.75	°C/W



**isc Silicon PNP Darlingtion Power Transistor****2N6648****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=-50\text{mA}$ ; $I_B=0$	-40		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=-5\text{A}$ ; $I_B=-10\text{mA}$		-2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=-10\text{A}$ ; $I_B=-100\text{mA}$		-3.0	V
$V_{BE(on)-1}$	Base-Emitter On voltage	$I_C=-5\text{A}$ ; $V_{CE}=-3\text{V}$		-2.8	V
$V_{BE(on)-2}$	Base-Emitter On voltage	$I_C=-10\text{A}$ ; $V_{CE}=-3\text{V}$		-4.5	V
$I_{CEO}$	Collector Cutoff current	$V_{CE}=-40\text{V}$ ; $I_B=0$		-1.0	mA
$I_{EBO}$	Emitter Cut-off current	$V_{EB}=-5\text{V}$ ; $I_C=0$		10	mA
$h_{FE-1}$	DC Current Gain	$I_C=-5\text{A}$ ; $V_{CE}=-3\text{V}$	1000	20000	
$h_{FE-2}$	DC Current Gain	$I_C=-10\text{A}$ ; $V_{CE}=-3\text{V}$	100		
$C_{OB}$	Output Capacitance	$I_E=0$ ; $V_{CB}=-10\text{V}$ ; $f_{test}=1.0\text{MHz}$		200	pF