

isc Silicon NPN Darlington Power Transistor

2N6059

DESCRIPTION

- Built-in Base-Emitter Shunt Resistors
- High DC current gain-
 $h_{FE} = 750$ (Min) @ $I_C = 6A$
- Collector-Emitter Sustaining Voltage-
 $V_{CEO(SUS)} = 100V$ (Min)
- Complement to type 2N6052

APPLICATIONS

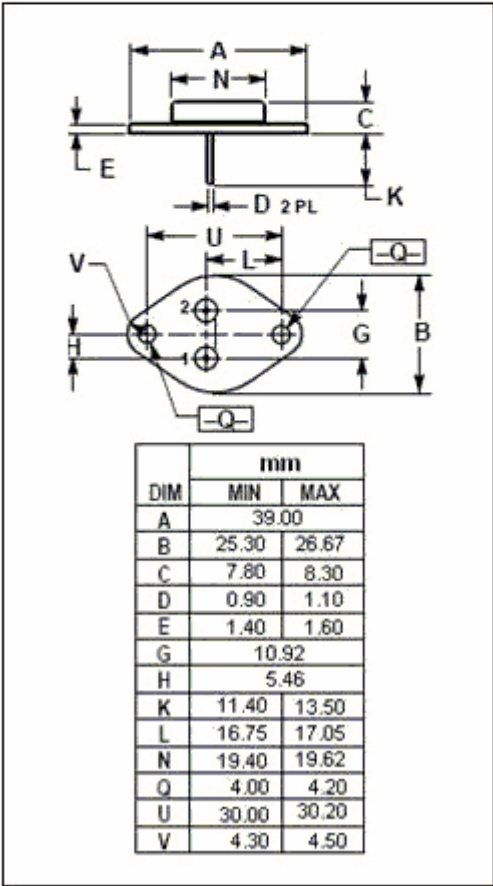
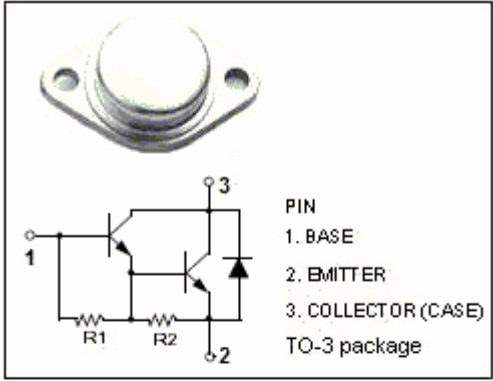
- Designed for general purpose amplifier and low frequency switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	12	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current	0.2	A
P_C	Collector Power Dissipation@ $T_C=25^{\circ}C$	150	W
T_J	Junction Temperature	200	$^{\circ}C$
T_{stg}	Storage Temperature	-65~200	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	ThermalResistance, Junction to Case	1.17	$^{\circ}C/W$



isc Silicon NPN Darlington Power Transistor**2N6059****ELECTRICAL CHARACTERISTICS** **$T_C=25^{\circ}\text{C}$ unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}$; $I_B=0$	100		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=6\text{A}$; $I_B=24\text{mA}$		2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=12\text{A}$; $I_B=120\text{mA}$		3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=12\text{A}$; $I_B=120\text{mA}$		4.0	V
$V_{BE(on)}$	Base-Emitter On voltage	$I_C=6\text{A}$; $V_{CE}=3\text{V}$		2.8	V
I_{CEO}	Collector Cutoff current	$V_{CE}=-50\text{V}$; $I_B=0$		1.0	mA
I_{CEX}	Collector Cutoff current	$V_{CE}=100\text{V}$; $V_{BE(off)}=-1.5\text{V}$ $V_{CE}=100\text{V}$; $V_{BE(off)}=-1.5\text{V}$, $T_C=150^{\circ}\text{C}$		0.5 5.0	mA
I_{EBO}	Emitter Cut-off current	$V_{EB}=5\text{V}$; $I_C=0$		2.0	mA
h_{FE-1}	DC Current Gain	$I_C=6\text{A}$; $V_{CE}=3\text{V}$	750	18000	
h_{FE-2}	DC Current Gain	$I_C=12\text{A}$; $V_{CE}=3\text{V}$	100		
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=10\text{V}$; $f_{test}=0.1\text{MHz}$		300	pF