

isc Silicon NPN Darlington Power Transistor

2N6057

DESCRIPTION

- Built-in Base-Emitter Shunt Resistors
- High DC current gain-
 $h_{FE} = 750$ (Min) @ $I_C = 6A$
- Collector-Emitter Sustaining Voltage-
 $V_{CEO(SUS)} = 60V$ (Min)
- Complement to type 2N6050

APPLICATIONS

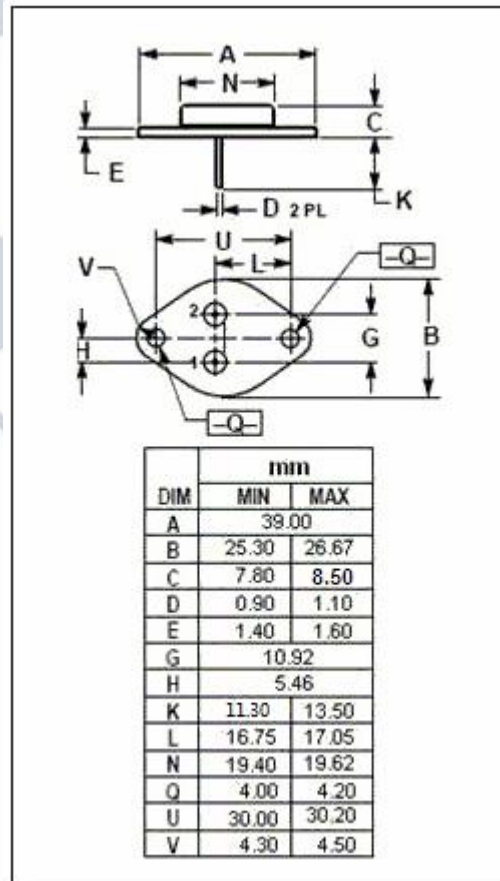
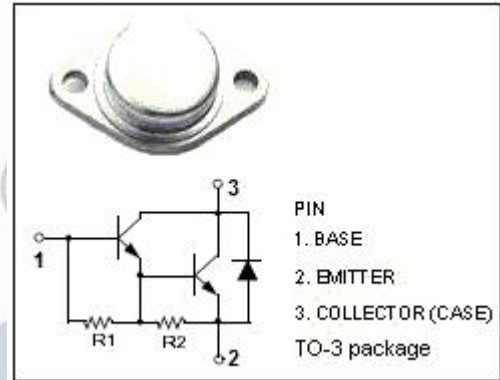
- Designed for general purpose amplifier and low frequency switching applications.

ABSOLUTE MAXIMUM RATINGS($T_c=25^\circ C$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	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	150	$^\circ C$
T_{stg}	Storage Temperature	-65~150	$^\circ C$

THERMAL CHARACTERISTICS

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



isc Silicon NPN Darlington Power Transistor**2N6057****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}; I_B=0$	60		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	$V_{CE}=30\text{V}; I_B=0$		1.0	mA
I_{CEX}	Collector Cutoff current	$V_{CE}=60\text{V}; V_{BE(off)}=-1.5\text{V}$ $V_{CE}=60\text{V}; V_{BE(off)}=-1.5\text{V}; T_C=150^\circ\text{C}$		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