

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

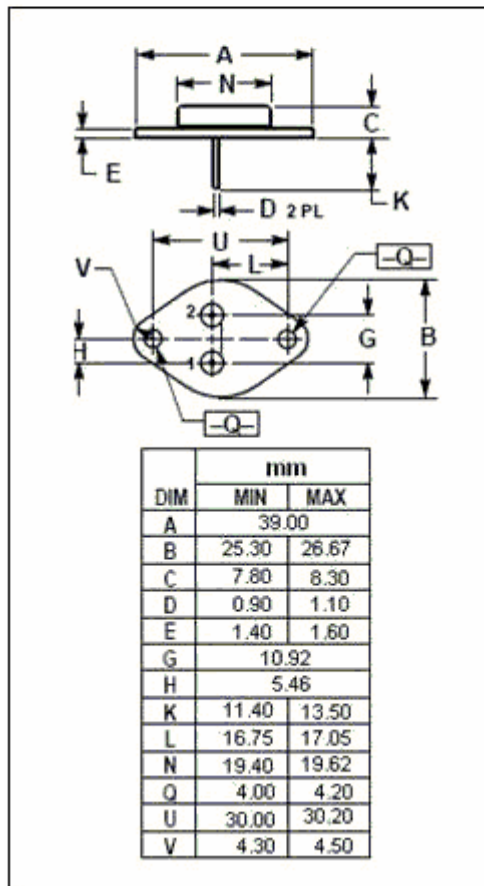
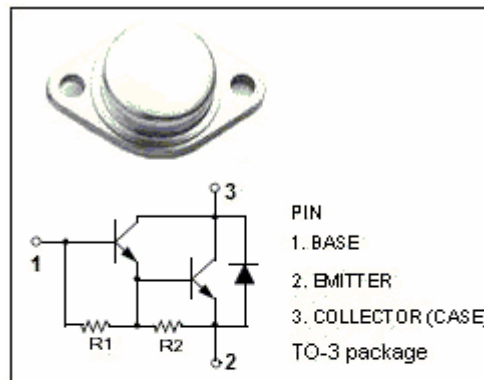
- Designed for general purpose amplifier and low frequency switching applications.

ABSOLUTE MAXIMUM RATINGS($T_C=25$)

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@ $T_C=25$	150	W
T_J	Junction Temperature	200	
T_{stg}	Storage Temperature	-65~200	

THERMAL CHARACTERISTICS

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



Silicon NPN Darlington Power Transistor**2N6057****ELECTRICAL CHARACTERISTICS** $T_C=25$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 100mA ; I_B= 0$	60		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 6A; I_B= 24mA$		2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 12A; I_B= 120mA$		3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 12A; I_B= 120mA$		4.0	V
$V_{BE(on)}$	Base-Emitter On voltage	$I_C= 6A ; V_{CE}= 3V$		2.8	V
I_{CEO}	Collector Cutoff current	$V_{CE}= -30V; I_B= 0$		1.0	mA
I_{CEX}	Collector Cutoff current	$V_{CE}= 60V; V_{BE(off)}= -1.5V$ $V_{CE}= 60V; V_{BE(off)}= -1.5V, T_C=150$		0.5 5.0	mA
I_{EBO}	Emitter Cut-off current	$V_{EB}= 5V; I_C= 0$		2.0	mA
h_{FE-1}	DC Current Gain	$I_C= 6A ; V_{CE}= 3V$	750	18000	
h_{FE-2}	DC Current Gain	$I_C= 12A ; V_{CE}= 3V$	100		
C_{OB}	Output Capacitance	$I_E=0 ; V_{CB}= 10V; f_{test}= 0.1MHz$		300	pF