

COMPLEMENTARY SILICON POWER TRANSISTORS

DESCRIPTION :

- Built-in Base-Emitter Shunt Resistors
- High DC Current Gain-
hFE= 750(min) @IC= 6A
- Collector-Emitter Sustaining Voltage-
V_{CEO(SUS)}= 80V(min)

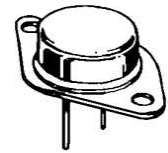
APPLICATIONS :

- Designed for general-purpose power amplifier and switching applications.

NPN

2N6058

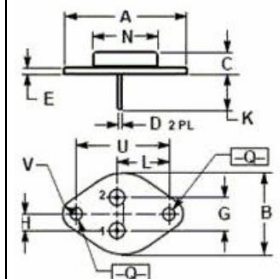
**12 AMPERES
COMPLEMENTARY
SILICON
POWER TRANSISTOR
80 VOLTS
150 WATTS**



TO-3

MAXIMUM RATINGS

Characteristic	Symbol	2N6058	Unit
Collector-Emitter Voltage	V _{CEO}	80	V
Collector-Base Voltage	V _{CBO}	80	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current-Continuous	I _C	12	A
Collector Current-Peak	I _{CM}	20	A
Base Current-Continuous	I _B	0.2	A
Collector Power Dissipation @TC=25°C	P _C	150	Watts
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-65 to +150	°C



PIN 1.BASE.
2.EMITTER
COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	39.00	
B	25.3	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
O	4.00	4.20
U	30.00	30.20
V	4.30	4.50

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R _{thj-c}	1.17	°C/W

ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min.	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Sustaining Voltage ($I_C = 50 \text{ mA}$, $I_B = 0$)	$V_{CE(SUS)}$	80		V
Collector Cutoff Current ($V_{CE} = 40 \text{ V}$, $I_B = 0$)	I_{CEO}		1.0	mA
Collector Cutoff Current ($V_{CE} = 80 \text{ V}$; $V_{BE(OFF)} = 1.5\text{V}$) ($V_{CE} = 80 \text{ V}$; $V_{BE(OFF)} = 1.5\text{V}$, $T_C=150^{\circ}\text{C}$)	I_{CEX}		0.5 5.0	mA
Emitter Cutoff Current ($V_{EB} = 5.0 \text{ V}$, $I_C = 0$)	I_{EBO}		2.0	mA

ON CHARACTERISTICS(1)

DC Current Gain ($I_C = 6 \text{ A}$, $V_{CE} = 3 \text{ V}$) ($I_C = 12 \text{ A}$, $V_{CE} = 3 \text{ V}$)	h_{FE}	750 100	18000	
Collector-Emitter Saturation Voltage ($I_C = 6 \text{ A}$, $I_B = 24 \text{ mA}$) ($I_C = 12 \text{ A}$, $I_B = 120 \text{ mA}$)	$V_{CE(SAT)}$		2.0 3.0	V
Base-Emitter Saturation Voltage ($I_C = 12 \text{ A}$, $I_B = 120 \text{ mA}$)	$V_{BE(SAT)}$		4.0	V
Base-Emitter On Voltage ($I_C = 6 \text{ A}$, $V_{CE} = 3 \text{ V}$)	$V_{BE(ON)}$		2.8	V

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