

## SILICON NPN POWER TRANSISTORS

### DESCRIPTION :

- Excellent Safe Operating Area
- DC Current Gain-hFE=20-70@ $I_C = 4A$
- Collector-Emitter Saturation Voltage-  
:  $V_{CE(SAT)} = 1.1V(Max) @ I_C = 4A$
- Complement to Type MJ2955
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

### APPLICATIONS :

- Designed for general-purpose switching and amplifiers applications

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

Characteristic	Symbol	2N3055	Unit
Collector-Base Voltage	$V_{CBO}$	100	V
Collector-Emitter Voltage	$V_{CER}$	70	V
Collector-Emitter Voltage	$V_{CEO}$	60	V
Emitter-Base Voltage	$V_{EBO}$	7	V
Collector Current-Continuous	$I_C$	15	A
Base Current	$I_B$	7	A
Collector Power Dissipation @ $T_C=25^{\circ}C$	$P_C$	115	Watts
Junction Temperature	$T_J$	150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-65 to +200	$^{\circ}C$

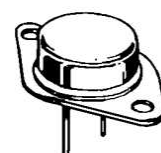
### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{th j-c}$	1.52	$^{\circ}C/W$

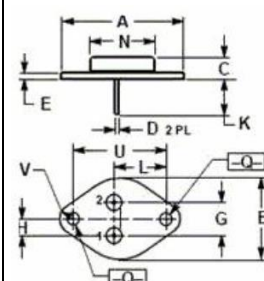
**NPN**

**2N3055**

**15 AMPERES  
COMPLEMENTARY  
SILICON  
POWER TRANSISTORS  
60 VOLTS  
115 WATTS**



**TO-3**



PIN 1.BASE.  
2.EMITTER  
3.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

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 ( $I_C = 30\text{ mA}$ , $I_B = 0$ )	$V_{CEO(SUS)}$	60		V
Collector Cutoff Current ( $V_{CE} = 30\text{ V}$ , $I_B = 0$ )	$I_{CEO}$		0.7	mA
Emitter Cutoff Current ( $V_{EB} = 7.0\text{ V}$ , $I_C = 0$ )	$I_{EBO}$		5	mA

## ON CHARACTERISTICS

DC Current Gain ( $I_C = 4\text{ A}$ , $V_{CE} = 4\text{ V}$ ) ( $I_C = 10\text{ A}$ , $V_{CE} = 4\text{ V}$ )	$h_{FE}$	20 5	70	
Collector-Emitter Saturation Voltage ( $I_C = 4\text{ A}$ , $I_B = 0.4\text{ A}$ ) ( $I_C = 10\text{ A}$ , $I_B = 3.3\text{ A}$ )	$V_{CE(SAT)}$		1.1 3.0	V
Base-Emitter On Voltage ( $I_C = 4\text{ A}$ , $V_{CE} = 4\text{ V}$ )	$V_{BE(ON)}$		1.5	V

## DYNAMIC CHARACTERISTICS

Current gain-Bandwidth product ( $I_C = 0.5\text{ A}$ , $V_{CE} = 10\text{ V}$ , $f = 1.0\text{ MHz}$ )	$f_T$	2.5		MHz
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