

# isc Silicon NPN Power Transistor

## MJE3055

### DESCRIPTION

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 60V(\text{Min})$
- High DC Current Gain-  
:  $h_{FE} = 20-100@I_C = 4A$
- Complement to Type MJE2955
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

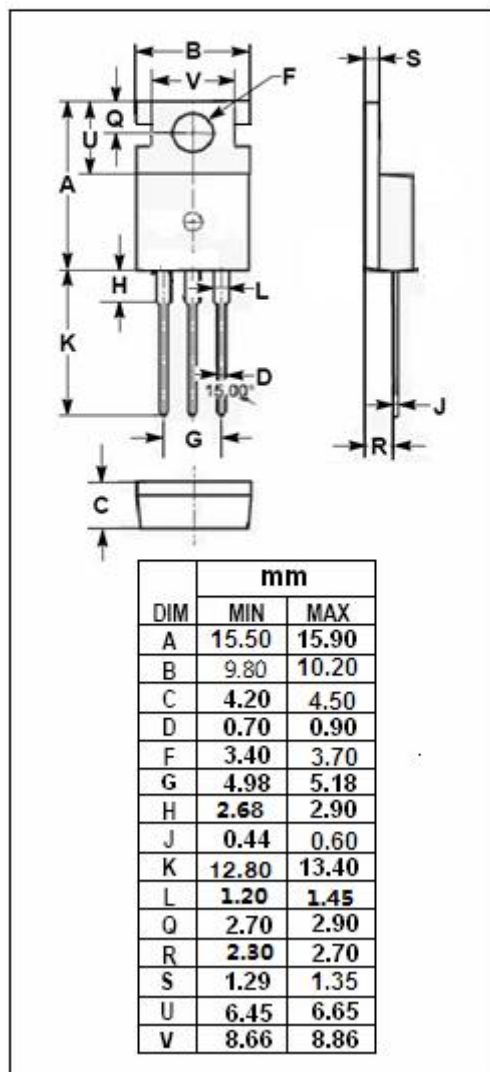
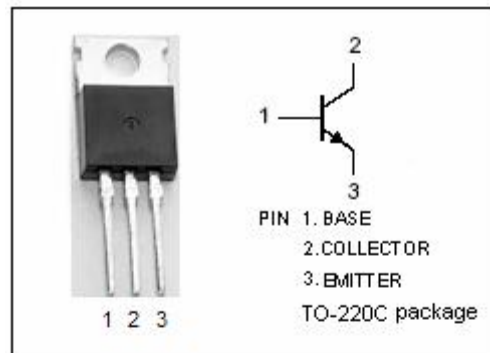
- Designed for use in general-purpose amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	70	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	10	A
$I_B$	Base Current-Continuous	6	A
$P_C$	Collector Power Dissipation @ $T_{amb}=25^{\circ}\text{C}$	2	W
$T_J$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.67	$^{\circ}\text{C/W}$



**isc Silicon NPN Power Transistor****MJE3055****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 50mA; I <sub>B</sub> = 0	60			V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 0.4A			1.1	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10A; I <sub>B</sub> = 3.3A			8.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 4A ; V <sub>CE</sub> = 4V			1.8	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 30V; I <sub>B</sub> = 0			0.7	mA
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 70V; I <sub>E</sub> = 0			1.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			5.0	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 4A ; V <sub>CE</sub> = 4V	20		100	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 10A ; V <sub>CE</sub> = 4V	5			
f <sub>T</sub>	Current Gain-Bandwidth Product	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 10V; f= 500kHz	2.0			MHz

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