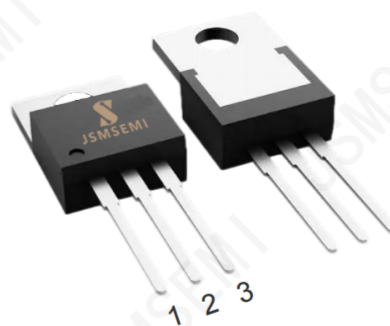


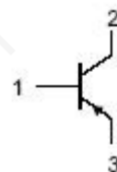
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -400V(\text{Min})$
- DC current gain -
: $h_{FE} = 30 \sim 150 @ I_C = -0.3A$
- With TO-220-3 Package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed for line operated audio output amplifier, switchmode power supply drivers and other switching applications



PIN
 1.BASE
 2.COLLECTOR
 3.BMITTER

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-400	V
V_{CEO}	Collector-Emitter Voltage	-400	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-1	A
I_{CM}	Collector Current-Peak	-3	A
I_B	Base Current	-1	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	40	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS TC=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -30mA; I_B = 0$	-400		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -1A; I_B = -0.2A$		-1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -1A; V_{CE} = -10V$		-1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -400V; I_E = 0$		-1.0	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -400V; I_B = 0$		-1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5V; I_C = 0$		-1.0	mA
h_{FE-1}	DC Current Gain	$I_C = -0.3A; V_{CE} = -10V$	30	150	
h_{FE-2}	DC Current Gain	$I_C = -1A; V_{CE} = -10V$	10		
f_T	Current Gain-Bandwidth Product	$I_C = -0.2A; V_{CE} = -10V; f_{test} = 2.0MHz$	10		MHz

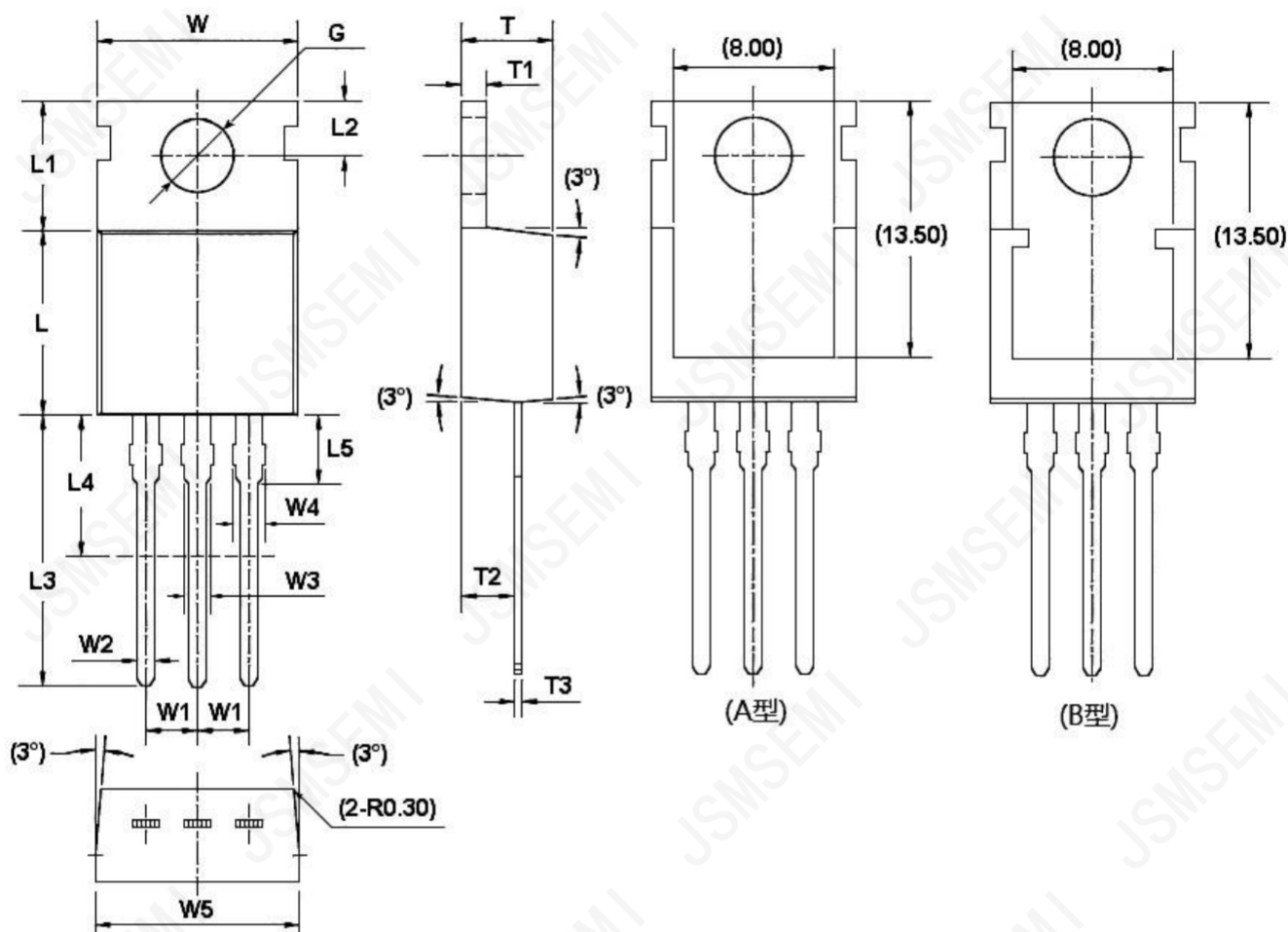
Pulse Test: Pulse Width $\leq 300 \mu s$, Duty Cycle $\leq 2\%$.

ORDERING INFORMATION

Order number	Package	Marking	Operation Temperature Range	MSL Grade	Ship, Quantity	Green
MJE5731A	TO-220-3	MJE5731A	-65 to 150°C	3	TUBE, 1000	Rohs

Package Information

TO-220-3



Unit: mm

Symbol	Size		Symbol	Size		Symbol	Size		Symbol	Size	
	Min	Max		Min	Max		Min	Max		Min	Max
W	9.66	10.28	W5	9.80	10.20	L4**	6.20	6.60	T3	0.45	0.60
W1	2.54 (TYP)		L	9.00	9.40	L5	2.79	3.30	G(Φ)	3.50	3.70
W2	0.70	0.95	L1	6.40	6.80	T	4.30	4.70			
W3	1.17	1.37	L2	2.70	2.90	T1	1.15	1.40			
W4*	1.32	1.72	L3	12.70	14.27	T2	2.20	2.60			

Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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