

isc Silicon NPN Power Transistor**MJD3055****DESCRIPTION**

- Excellent Safe Operating Area
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.1 \text{ V(Max)} @ I_C = 4 \text{ A}$
- Complement to Type MJD2955
- DPAK for Surface Mount Applications
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

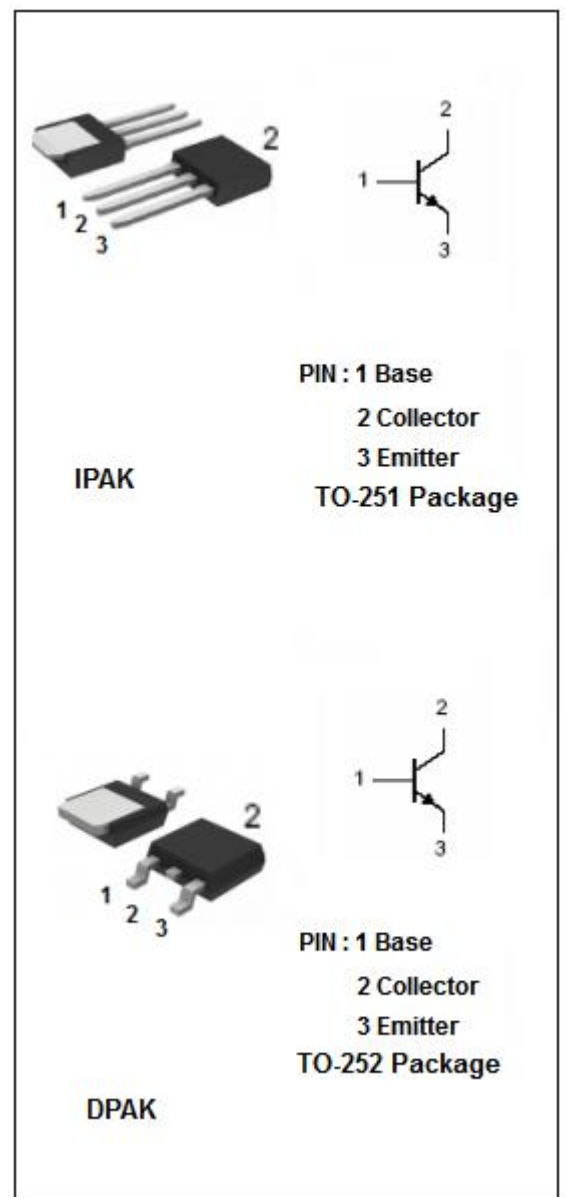
- Designed for use in general purpose amplifier and low speed switching applications

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	6	A
P_C	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	20	W
	Collector Power Dissipation@ $T_a=25^\circ\text{C}$	1.75	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	6.25	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	71.4	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

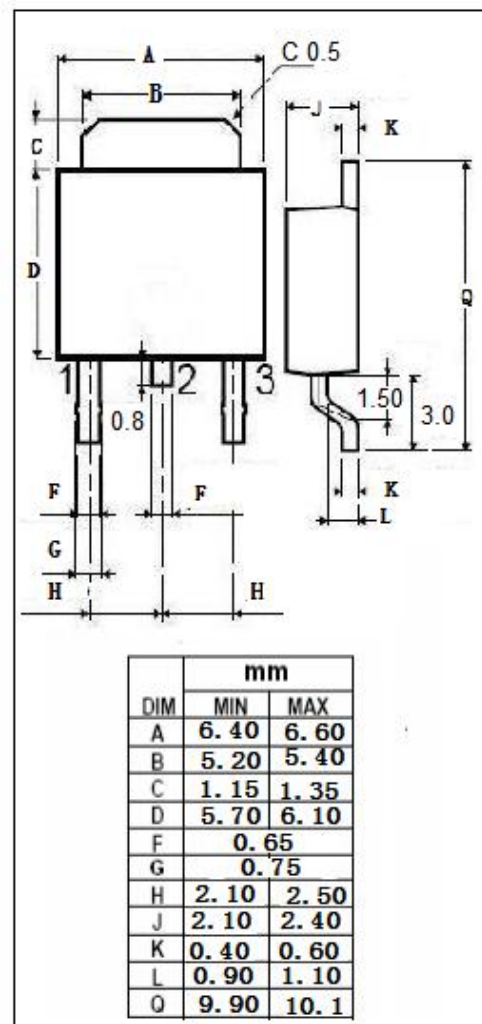
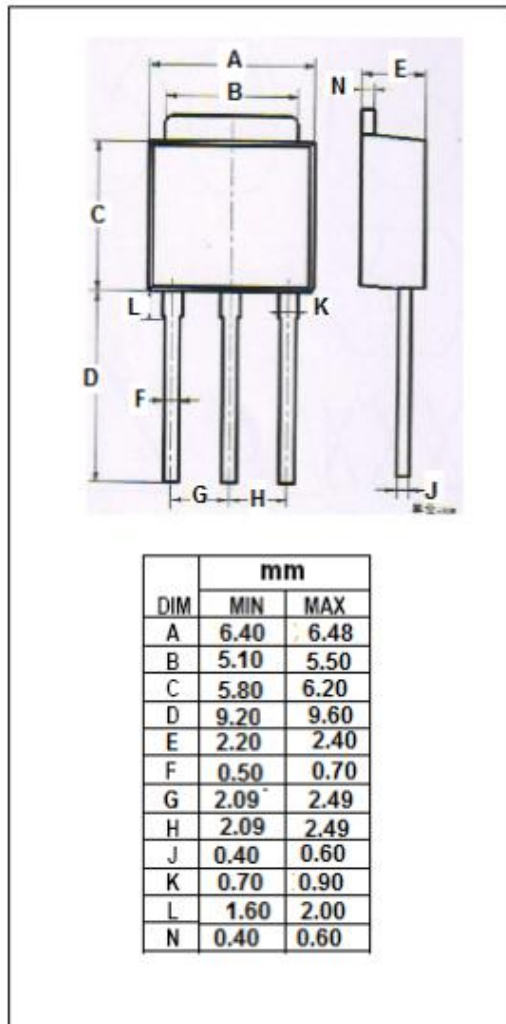
SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	60		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.4\text{A}$		1.1	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=3.3\text{A}$		8.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=4\text{A}; V_{CE}=4\text{V}$		1.8	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=30\text{V}; I_B=0$		50	μA
I_{CBO}	Collector Cutoff Current	$V_{CB}=100\text{V}; I_E=0$		0.02	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		0.5	mA
h_{FE-1}	DC Current Gain	$I_C=4\text{A}; V_{CE}=4\text{V}$	20	100	
h_{FE-2}	DC Current Gain	$I_C=10\text{A}; V_{CE}=4\text{V}$	5		
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}; f_{test}=1.0\text{MHz}$	2.0		MHz

Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

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Outline Drawing



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